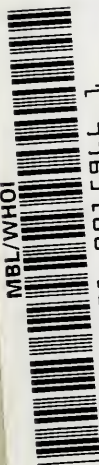




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BRITISH HYDROID ZOOPHYTES.

VOL. II.



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A
HISTORY
OF THE
BRITISH HYDROID ZOOPHYTES.

BY
THOMAS HINCKS, B.A.

IN TWO VOLUMES.

VOL. II.—PLATES.

LONDON:
JOHN VAN VOORST, PATERNOSTER ROW.

MDCCCLXVIII.

"Treasures the vulgar in their scorn reject."-- CRABBE.

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The magnified detail has in almost all cases been drawn by
the Author with the Camera lucida, to the same scale.



PLATE I.

[*The figures which are not credited to any one else are drawn by the Author.*]

FIG.

1. CLAVA MULTICORNIS, page 2, natural size.
 - 1 *a*. The same magnified.—1 *b*. The planule. From drawings by Mr. Alder.
2. CLAVA SQUAMATA, p. 4, nat. size.
 - 2 *a*. A polypite of the same, magnified.
3. CLAVA CORNEA, p. 5, nat. size.
 - 3 *a*. A polypite, magnified.



Tuffen West. sculp.

W. West. imp

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PLATE II.

FIG.

1. CLAVA LEPTOSTYLA, p. 6, a group, of the natural size.
 - 1 *a*. The same, magnified. After Agassiz, 'Contributions to the Nat. Hist. of the U. S.' vol. iv. pl. xxi.
2. TUBICLAVA CORNUCOPIÆ, p. 11, nat. size.
 - 2 *a*. The same, magnified. After Alder.



Tuffen West sculp.

W. West imp.



PLATE III.

FIG.

1. *TURRIS NEGLECTA*, p. 13, polypites, of the natural size.
1 *a*. Polypites, magnified. After Wright.—1 *b*. A polypite in an earlier stage. After Gosse.—1 *c*. The medusiform zooid, magnified. After Forbes.
2. *CORDYLOPHORA LACUSTRIS*, p. 16, nat. size. After Allman.
2 *a*. A polypite and a portion of the stem bearing a gonophore, magnified. The Author.
3. The gonozooid of *SYNCORYNE* (*SARSIA*), p. 49, magnified. The Author.



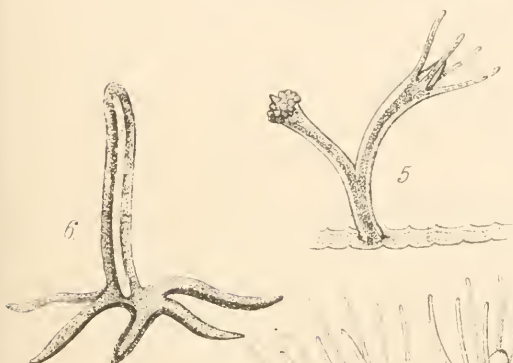
uffen West. sculp.

W. West unp.

PLATE IV.

FIG.

1. *HYDRACTINIA ECHINATA*, p. 23, nat. size.
2. A group of the same (female), magnified.
3. A portion of the crust (magnified), showing an alimentary and fertile polypite, a spine, and the spiral and tentacular appendages. This figure is diagrammatic.
4. A polypite bearing male gonophores.
5. A monstrous polypite formed by the union of a sterile and a fertile zooid.
6. A polypite in an early stage of growth. After Quatre-fages.



Tuften West sculp.

W. West imp.

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PLATE V.

FIG.

a. *PODOCORYNE CARNEA*, p. 29, nat. size.

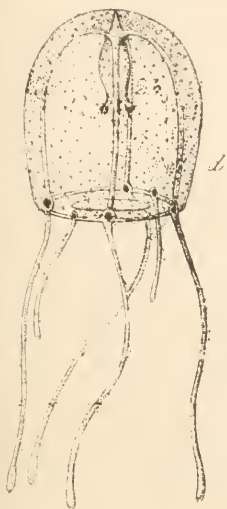
b. A portion of a colony, magnified, with the base consolidated into a crust.

c. A portion of a colony, with a simple retiform base.

d. The gonozoid, magnified.

e. A polypite from the edge of the shell, with three of the spiral appendages.

e'. One of the spiral appendages.



W. West sculp.

W. West imp.

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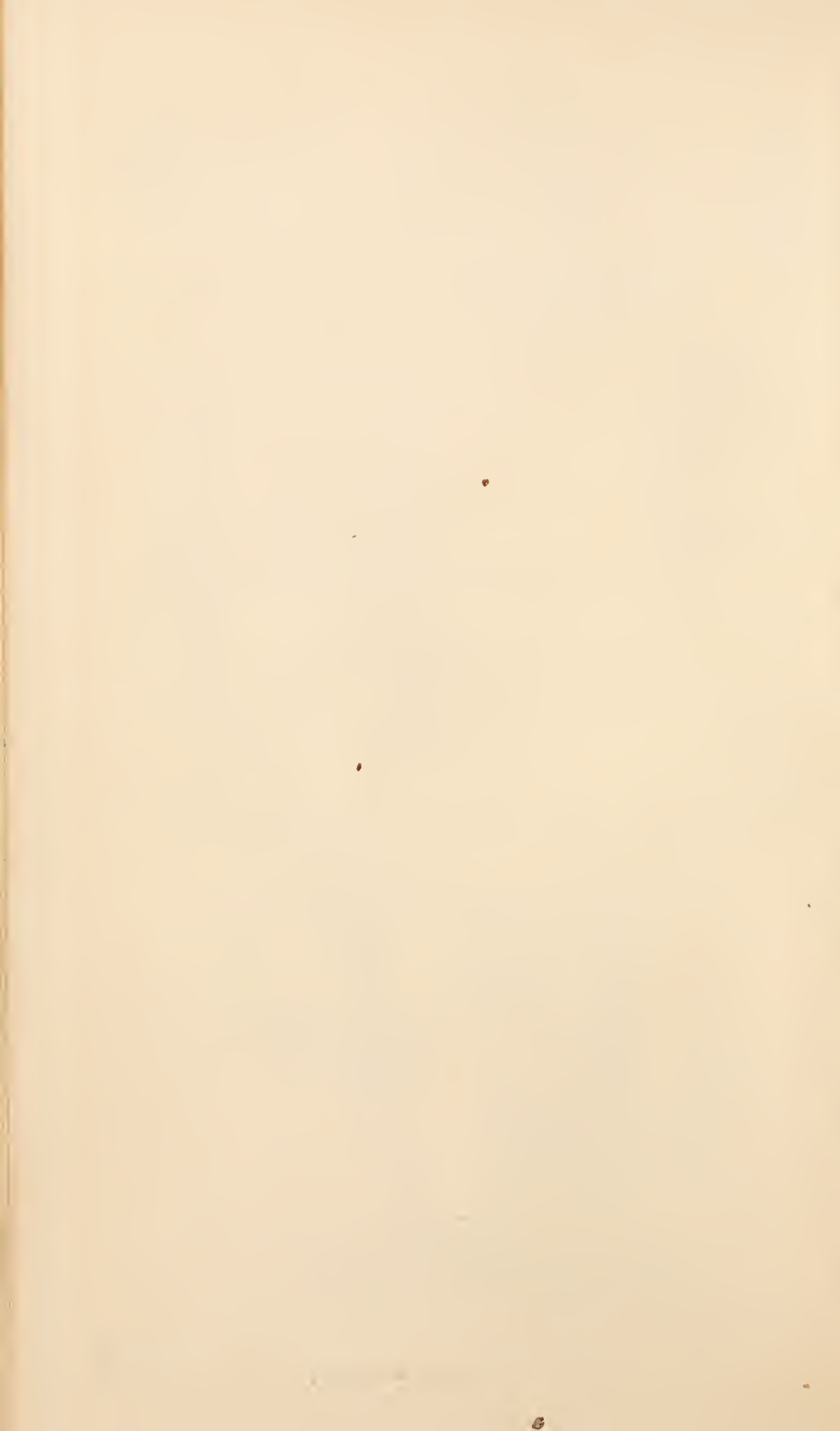


PLATE VI.

FIG.

1. *PODOCORYNE AREOLATA*, p. 32, on *Natica Alderi*, nat. size.

1 *a*. The same, highly magnified.—1 *b*. The gonozooid, magnified.—1 *c*. A portion of the spinous crust, magnified. After Alder.

2. *CORYNOPSIS ALDERI*, p. 34, polypites magnified.

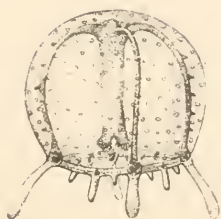
2 *a*. The gonozooid.—2 *b*. The manubrium, showing the oral tentacles.—2 *c*. One of the bulbs, bearing the ocelli and marginal tentacles. After figures by G. Hodge, Esq.



1c.



1d



1b



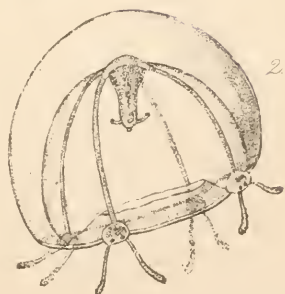
2b



2



2c



2a

Tuffen West. sculp.

W. West imp

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PLATE VII.

FIG.

1. *CORYNE PUSILLA*, p. 39, nat. size.

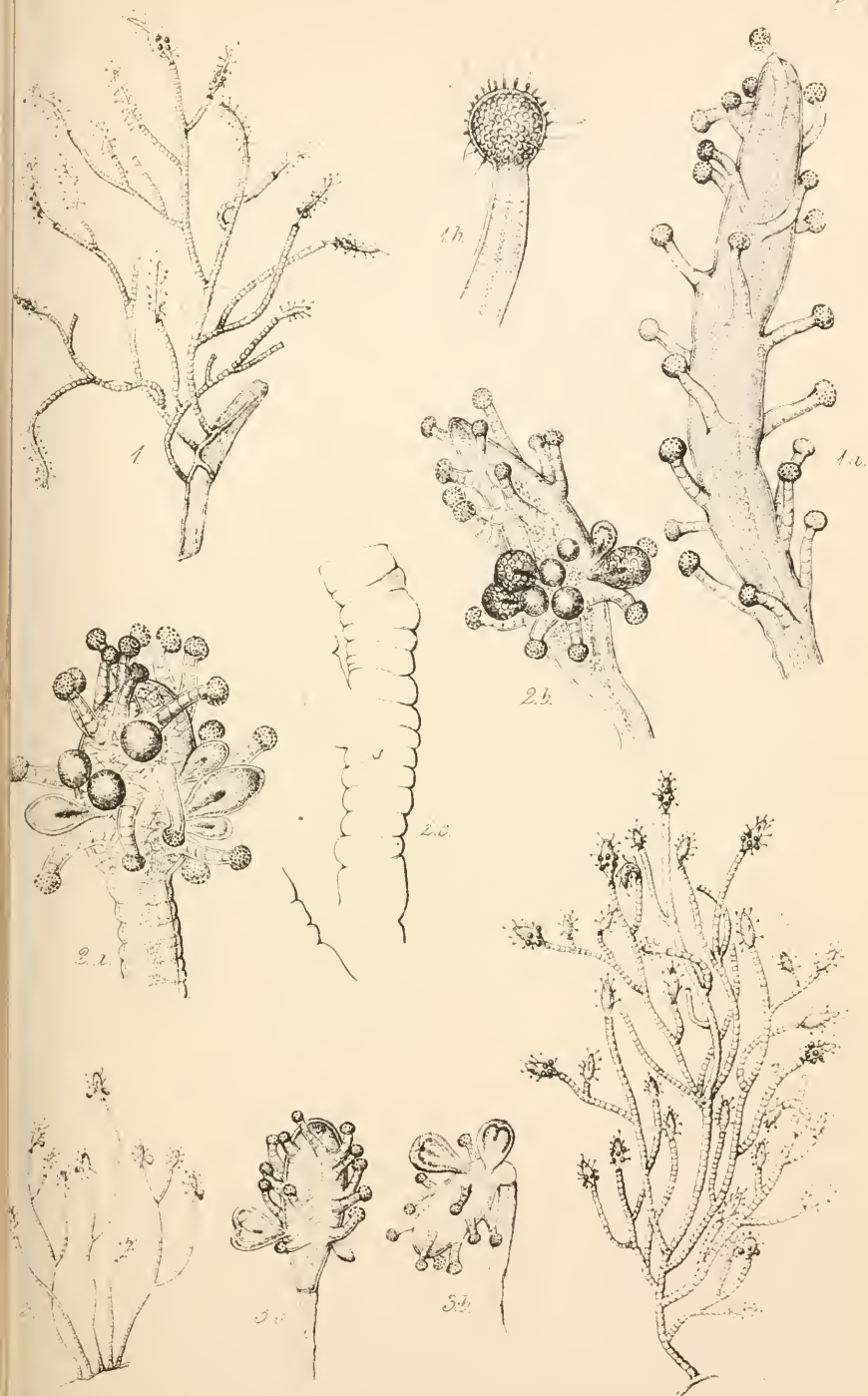
1 *a*. A polypite magnified.—1 *b*. A tentacle with the threads of the nematocysts exerted.

2. *CORYNE FRUTICOSA*, p. 44, nat. size.

2 *a* and 2 *b*. Polypites magnified.—2 *c*. A portion of the stem, magnified.

3. *SYNCORYNE SARSII*, p. 52, nat. size.

3 *a* and 3 *b*. Polypites, magnified.



after West sculp.

W. West imp.

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PLATE VIII.

FIG.

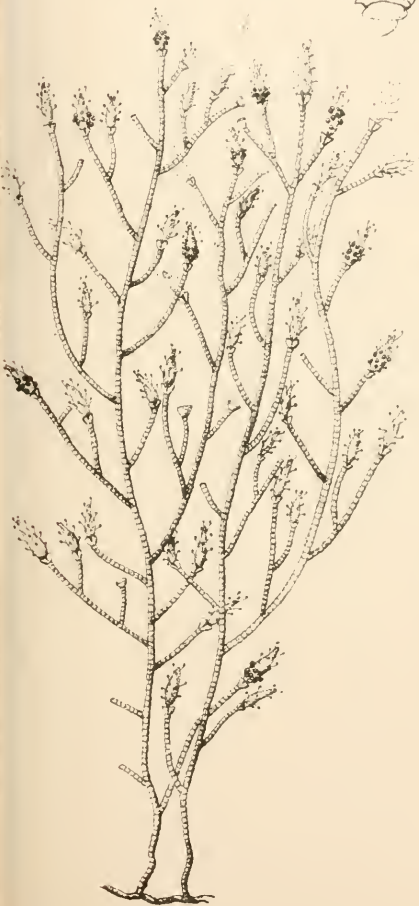
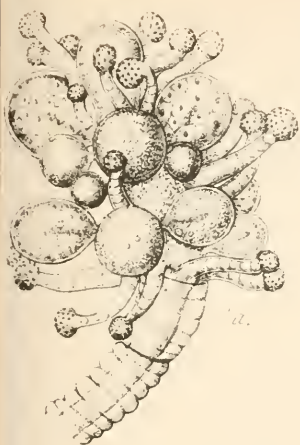
1. *CORYNE VAGINATA*, p. 41, nat. size.

1 *a* and 1 *b*. Polypites, magnified.—1 *c*. The cup-like expansion of the polypary at the base of the polypite.

2. *CORYNE VERMICULARIS*, p. 42, nat. size.

2 *a*. A polypite, magnified *.—2 *b*. A portion of the stem, magnified.

* All the enlarged figures of *Coryne* are drawn to the same scale, so as to exhibit the comparative size.



Tuffen West sculp.

W. West unp.

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PLATE IX.

FIG.

1. *CORYNE VAN-BENEDENII*, p. 45, nat. size.

1 *a* and 1 *b*. Polypites, magnified.—1 *c*. A gonophore, highly magnified to show the structure and the contained embryo.—1 *d*. A polypite with gonophores, magnified.

2. *SYNCORYNE EXIMIA*, p. 50, nat. size.

2 *a*, 2 *b*, 2 *c*. Polypites, magnified.—2 *d*. A portion of a stem and branch.—2 *e*. A gonophore, magnified.—2 *f*. Annulated space at the base of the stem.

3. *ZANCLEA IMPLEXA*, p. 59, nat. size.

3 *a*. A polypite, magnified.—3 *b*. A portion of the stem, magnified to show the structure of the polypary.—3 *c*. The gonozoid. After Alder.—3 *d*. One of the tentacles of *Zanclaea costata*. After Gegenbaur.



Tuffen West. sculp.

W. West imp.

PLATE X.

FIG.

1. SYNCORYNE GRAVATA, p. 53, nat. size.

1 *a*. The same, magnified.—1 *b*. A single polypite, more highly magnified.—1 *c*. A polypite partially atrophied.—1 *d*. A polypite wholly atrophied, bearing two imperfect gonozooids (T. H.).—1 *e*. A gonozooid almost fully developed.—1 *f*. A female gonozooid, as it appears late in the breeding-season, laden with ova. All the figures of *S. gravata*, with the exception of 1 *d*, are after Agassiz, 'Contrib. to the N. H. U. S.' vol. iii. pl. xvii.

2. SYNCORYNE DECIPIENS, p. 56, polypites, magnified.
From a drawing by Mr. Alder.



Tuffen West. sculp.

W. West imp.

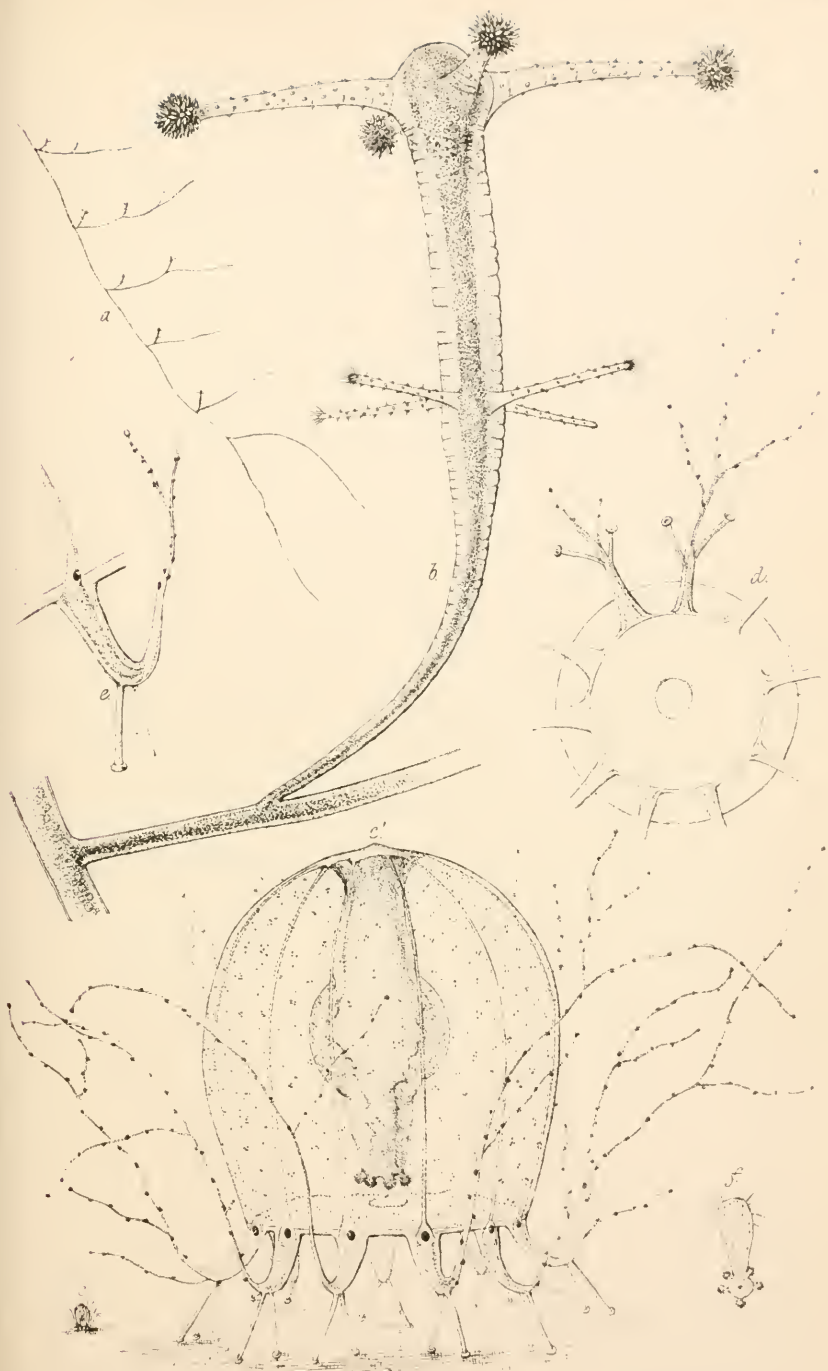
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PLATE XI.

FIG.

a. CLADONEMA RADIATUM, p. 62, nat. size.

b. A polypite, highly magnified.—*c.* The gonozooid, nat. size.—*c'*. Ditto, magnified.—*d.* Ditto, as seen from below.—*e.* One of the tentacles of the gonozooid.—*f.* The manubrium, showing the oral lobes. From drawings by E. W. H. Holdsworth, Esq.



Tuffen West sculp.

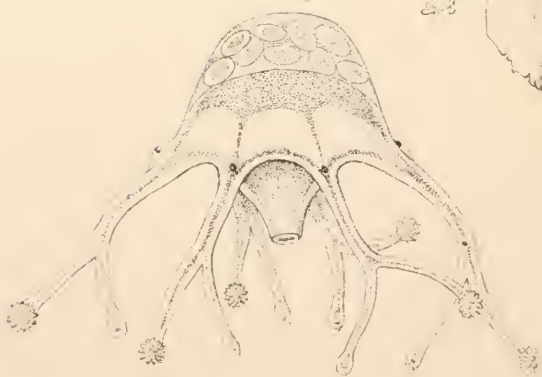
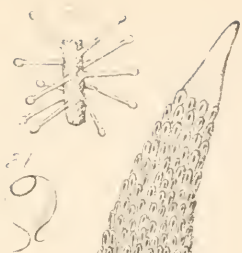
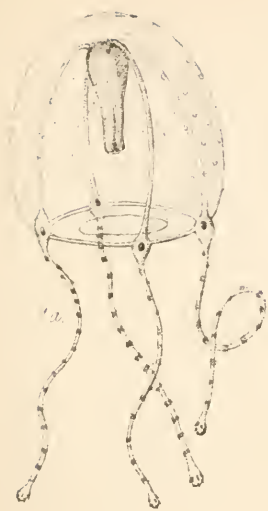
W. West imp.

London. John Van Voorst. MDCCCLXIX.

PLATE XII.

FIG.

1. *STAURIDIUM PRODUCTUM*, p. 68, a polypite, highly magnified.—1 *a*. The gonozooid.
2. *CLAVATELLA PROLIFERA*, p. 73, a polypite, highly magnified, bearing clusters of gonozooids.
2 *a*. The ambulatory gonozooid, magnified.
3. *MYRIOTHELA PHRYGIA*, p. 77, a little above nat. size.—
3'. The same, partially contracted, nat. size.
3 *a*. The embryo, magnified. After Alder.—3 *b* and 3 *d*. The gonophore, magnified.—3 *c*. A tentacle, magnified.



Tuffen West sculp.

W. West unip.

PLATE XIII.

FIG.

a. EUDENDRIUM RAMOSUM, p. 82, nat. size.

b. A portion, magnified.

c. Ditto, more highly magnified.

From drawings by Mr. Tuffen West.



Tuffen West sculp.

W. West imp.

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PLATE XIV.

FIG.

1. *EUDENDRIUM ARBUSCULA*, p. 84, nat. size.

1 *a*. Male gonophore, magnified. This figure is after Wright.

2. *EUDENDRIUM CAPILLARE*, p. 84, nat. size.

3. *EUDENDRIUM INSIGNE*, p. 86, nat. size.

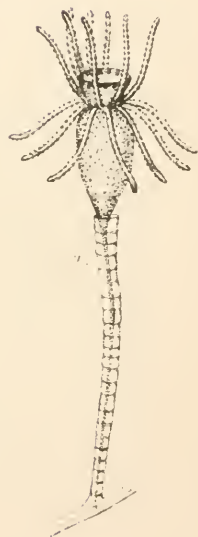
3 *a*. A polypite, highly magnified.

3 *b*. A polypite with male gonophores.

4. *GARVEIA NUTANS*, p. 102, nat. size.

4 *a*. A polypite, magnified.

4 *b*. Gonophore, magnified.



Tuffen West. sculp.

W. West imp.

PLATE XV.

FIG.

1. EUDENDRIUM ANNULATUM, p. 83, nat. size.

1 *a*. The extremity of a branch, magnified.—1 *b*. A portion of one of the larger stems. These figures are after Alder.

2. BIMERIA VESTITA, p. 103, nat. size.

2 *a*. A portion bearing a gonophore, magnified.—2 *b*. A tentacle, magnified to show the membranous sheath. After Wright.

3. SYNCORYNE PULCHELLA, p. 57, and Appendix, p. 319, magnified.—3 *a*. A tentacle, magnified. From drawings by the Author.



Tuffen West. sculp.

W. West imp.

PLATE XVI.

FIG.

1. *ATRACTYLIS ARENOSA*, p. 88, nat. size.

1 *a*. Ditto, magnified.—1 *b*. The ovary after the rupture of the gonophore. From drawings by the Author.

2. *PERIGONIMUS REPENS*, p. 90, on an operculum, nat. size.

2 *a*. Polypites, magnified.—2 *b*. The gonozooid, magnified. From drawings by Mr. Alder.

3. *PERIGONIMUS SERPENS*, p. 95, highly magnified. From a drawing by the Author.



Tuffen West. sculp.

W. West imp.

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PLATE XVII.

FIG.

1. *PERIGONIMUS SESSILIS*, p. 93, magnified.

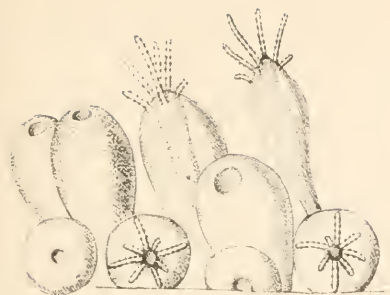
1 *a*. A single polypite, more highly magnified. After Dr. Strethill Wright.

2. *PERIGONIMUS PALLIATUS*, p. 93, magnified. After Dr. Strethill Wright.

3. *PERIGONIMUS* (?) *LINEARIS*, p. 96, nat. size.

3 *a*. The same, magnified.—3 *b*. The gonozoid. After Alder.

4. *PERIGONIMUS REPENS* (young), p. 90, magnified. From a drawing by Mr. Alder.



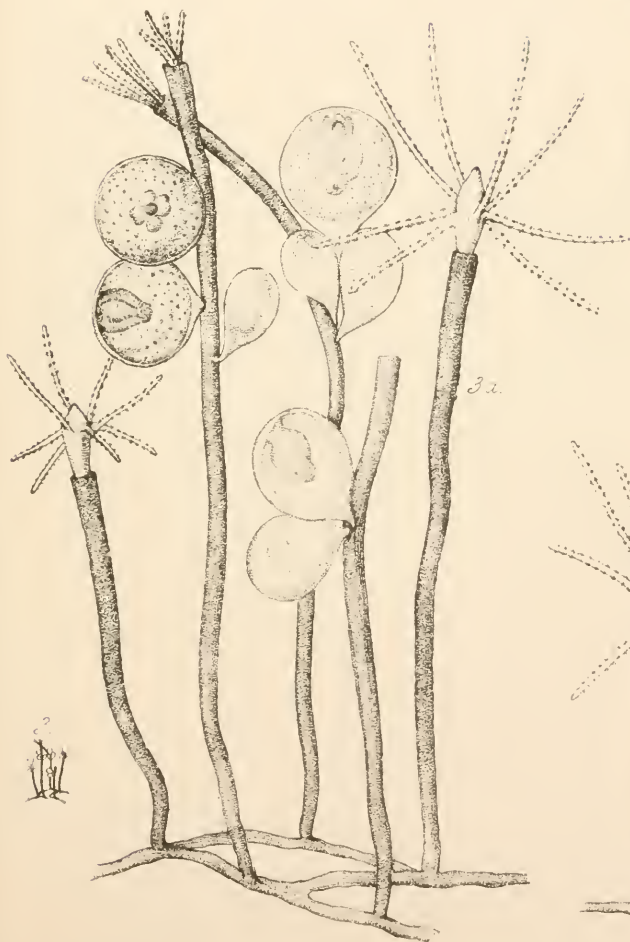
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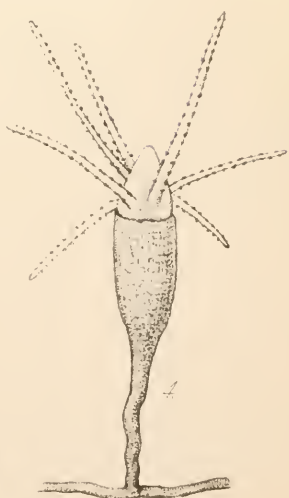
1a



32.



32.



4

Tuffen West sculp.

W. West ump

PLATE XVIII.

FIG.

1. *DICORYNE CONFERTA*, p. 105, nat. size.

1 *a*. The same, magnified.—1 *b*. The gonozoid (female), magnified. After Alder.

2. *HETEROCORDYLE CONYBEAREI*, p. 107, a colony, of the nat. size, on shell.

2 *a*. A portion, magnified.—2 *b*. The gonophore, magnified. After Allman.



Ruffen West sculp.

W. West imp.

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PLATE XIX.

FIG.

1. *HYDRANTHEA MARGARICA*, p. 100, magnified.

1 *a*. One of the tentacles bearing a cluster of thread-cells, magnified.—1 *b*. One of the branched vessels of the sporosac.—1 *c*. Bean-shaped thread-cells, magnified. From drawings by the Author.

2. *BOUGAINVILLIA RAMOSA*, p. 109, nat. size. From a drawing by Mr. Tuffen West.

2 *a*. A branchlet, magnified, to show the cup-like expansion of the polypary around the polypite (T. H.).—2 *b*. A branchlet, bearing a gonophore, magnified (T. H.).—2 *c*. The gonozoid, at the time of detachment, highly magnified. After Van Beneden.

3. *BOUGAINVILLIA* ? species, p. 112, nat. size.

3 *a*. The same, magnified. From drawings by the Author.



Ruffen West. sculp.

W. West. imp.

PLATE XX.

FIG.

TUBULARIA INDIVISA, p. 115.

- a.* Nat. size.—*b.* A cluster of gonophores, magnified.—
c, d. The embryo shortly after its exclusion.



Tuffen West. sculp.

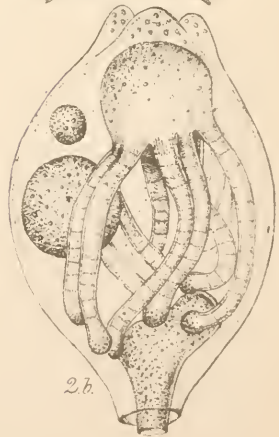
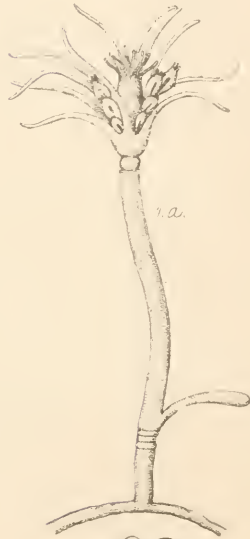
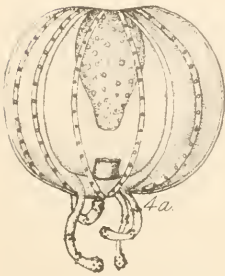
W. West imp

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PLATE XXI.

FIG.

1. *TUBULARIA LARYNX*, p. 118, nat. size. The Author.
 - 1 *a*. A polypite, magnified. From a drawing by Mr. Alder.
2. *TUBULARIA CORONATA*, p. 119, nat. size.
 - 2 *a*. A cluster of gonophores, magnified. The Author.
 - 2 *b*. A single gonophore, highly magnified, to show the contained embryo. After Van Beneden.
3. *TUBULARIA BELLIS*, p. 122, nat. size.
 - 3 *a*. A cluster of gonophores, magnified. The Author.
4. *ECTOPLEURA DUMORTIERII*, p. 124, nat. size. The Author.
 - 4 *a*. The gonozooid, magnified. After Van Beneden.



Tuffen West sculp.

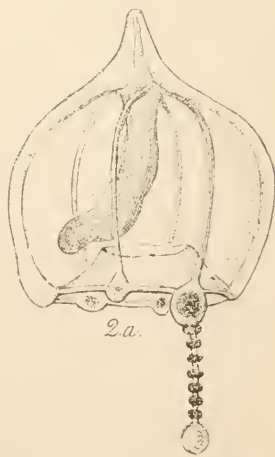
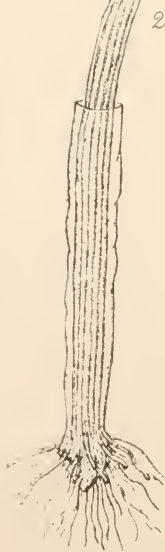
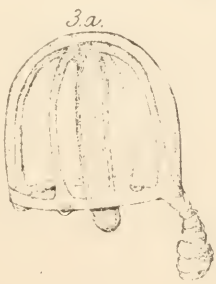
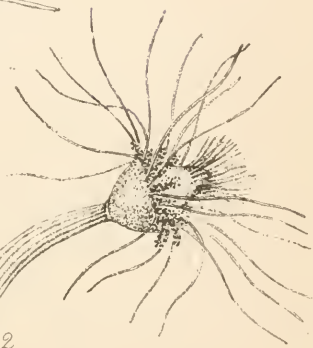
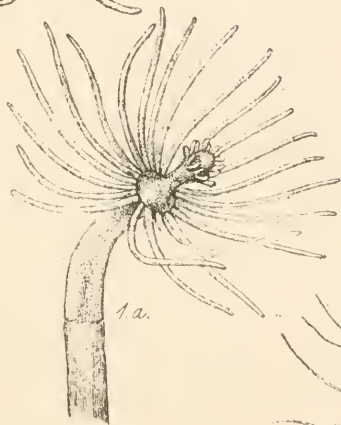
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PLATE XXII.

FIG.

1. *TUBULARIA SIMPLEX*, p. 121, nat. size.
 - 1 *a*. The polypite, magnified. After Alder.
2. *CORYMORPHA NUTANS*, p. 127, nat. size. From a drawing by the Author.
 - 2 *a*. The gonozooid, magnified. After Hodge.
3. *CORYMORPHA NANA*, p. 130, magnified.
 - 3 *a*. The gonozooid after liberation, magnified.—3 *b*. A group of gonozooids before liberation.—3 *c*. Another group, differently shaped. After Alder.



Tuffen West. sculp.

W West imp.

PLATE XXIII.

FIG.

1. *VORTICLAVA HUMILIS*, p. 132, nat. size.

1 *a*. The same, magnified.—1 *b*. One of the capitate tentacles, much enlarged. After Alder.

2. *VORTICLAVA PROTEUS*, p. 133, contracted.

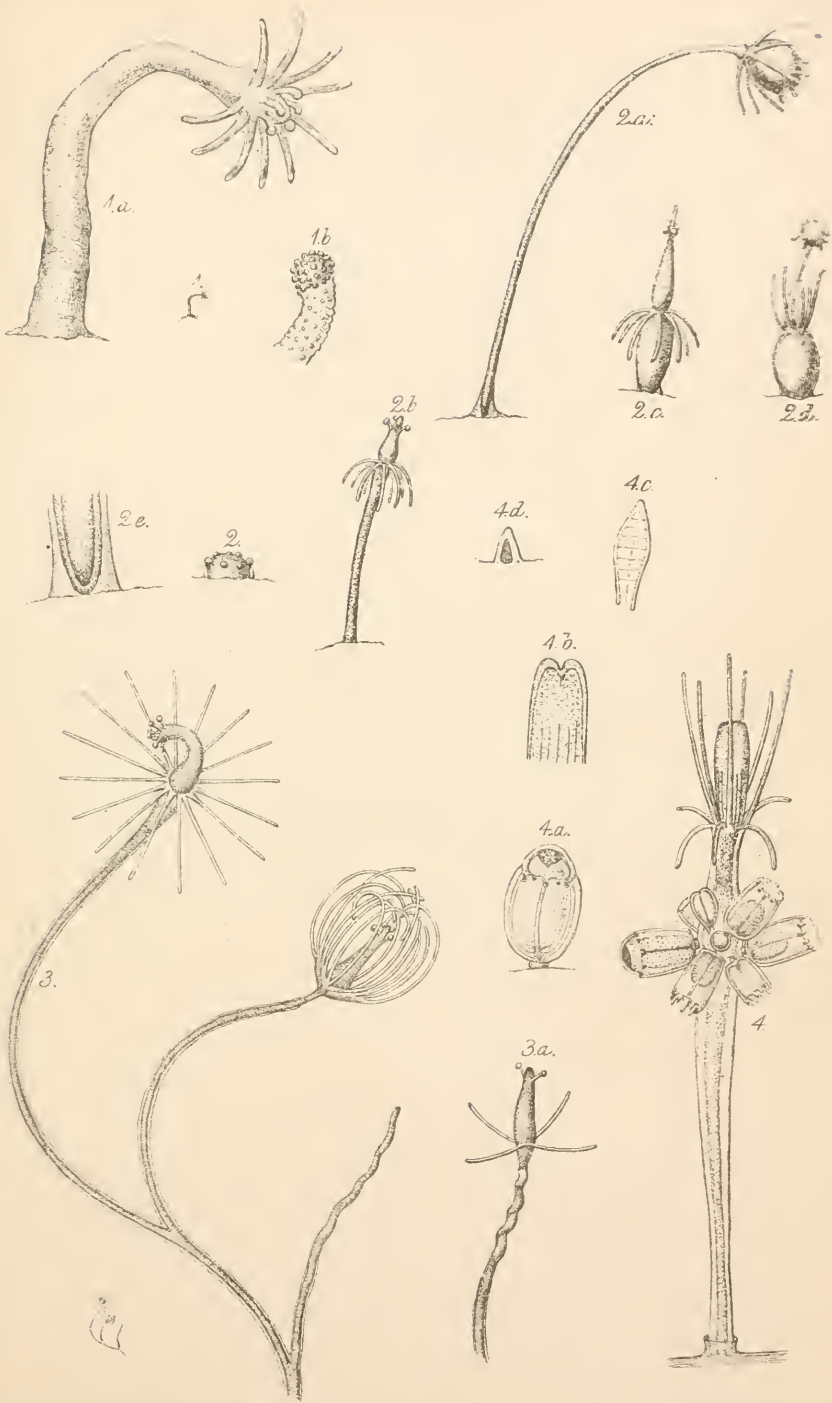
2 *a*, 2 *b*, 2 *c*, 2 *d*. The same, in different states.—2 *e*. Diagram of the tissues of the polypite. After Dr. Strethill Wright.

3. *ACHARADRIA LARYNX*, p. 134, magnified.

3 *a*. An immature polypite. After Dr. Wright.

4. *PODOCORYNE PROBOSCIDEA*, p. 317 (Appendix), highly magnified.

4 *a*. A gonophore.—4 *b*. The oral extremity of the proboscis of the polypite.—4 *c*. A tentacle when contracted.—4 *d*. One of the marginal tentacles of the gonozoid: all magnified. From drawings by the Author.



Tuffien West sculp.

W. West imp.

PLATE XXIV.

FIG.

1. *CLYTIA JOHNSTONI*, p. 143, magnified.

1 *a*. The gonozoid.

2. *CAMPANULARIA VOLUBILIS*, p. 160, magnified.

3. *CAMPANULARIA HINCKSH*, p. 162, magnified.

3 *a*. Ditto, with the capsule, magnified.





Tuffen West. sculp.

W. West imp.



PLATE XXV.

FIG.

1. *OBELIA GENICULATA*, p. 149, nat. size.

1 *a.* A shoot, magnified.

2. *GONOTHYRÆA LOVÉNI*, p. 181, nat. size.

2 *a.* A shoot, magnified, bearing female gonophores.

2 *b.* A capsule, with male gonophores, magnified.



Tuffen West sculp.

W. West imp.



PLATE XXVI.

FIG.

1, 1'. *OBELIA GELATINOSA*, p. 151, nat. size.

1 *a*. A portion, magnified. From drawings by Mr. Tuffen
West.

2, 2 *a*. *CAMPANULARIA RARIDENTATA*, p. 176, magnified.
From drawings by Mr. Alder.



Tuffen West sculp.

W. West ump



PLATE XXVII.

FIG.

OBELIA LONGISSIMA, p. 154.

a. Nat. size. From a drawing by Mr. T. West.

b. A portion enlarged (T. H.).



Tuffen West. sculp.

W. West imp.

PLATE XXVIII.

FIG.

1. *OBELIA DICHOTOMA*, p. 156, nat. size. From a drawing by Mr. T. West.

1 *a*. A shoot, magnified (T. H.).—1 *b*. A capsule, magnified (T. H.).—1 *c*, 1 *d*. The gonozoid. From drawings by Mr. Alder.

2. *CAMPANULARIA EXIGUA*, p. 172, a shoot, magnified (T. H.).

2 *a*. The gonotheca. After Gegenbaur.



PLATE XXIX.

FIG.

OBELIA FLABELLATA, p. 157.

a, b. Nat. size. From drawings by Mr. Tuffen West.

c. A shoot, magnified (T. II.).



Tuffen West. sculp.

W. West imp.

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PLATE XXX.

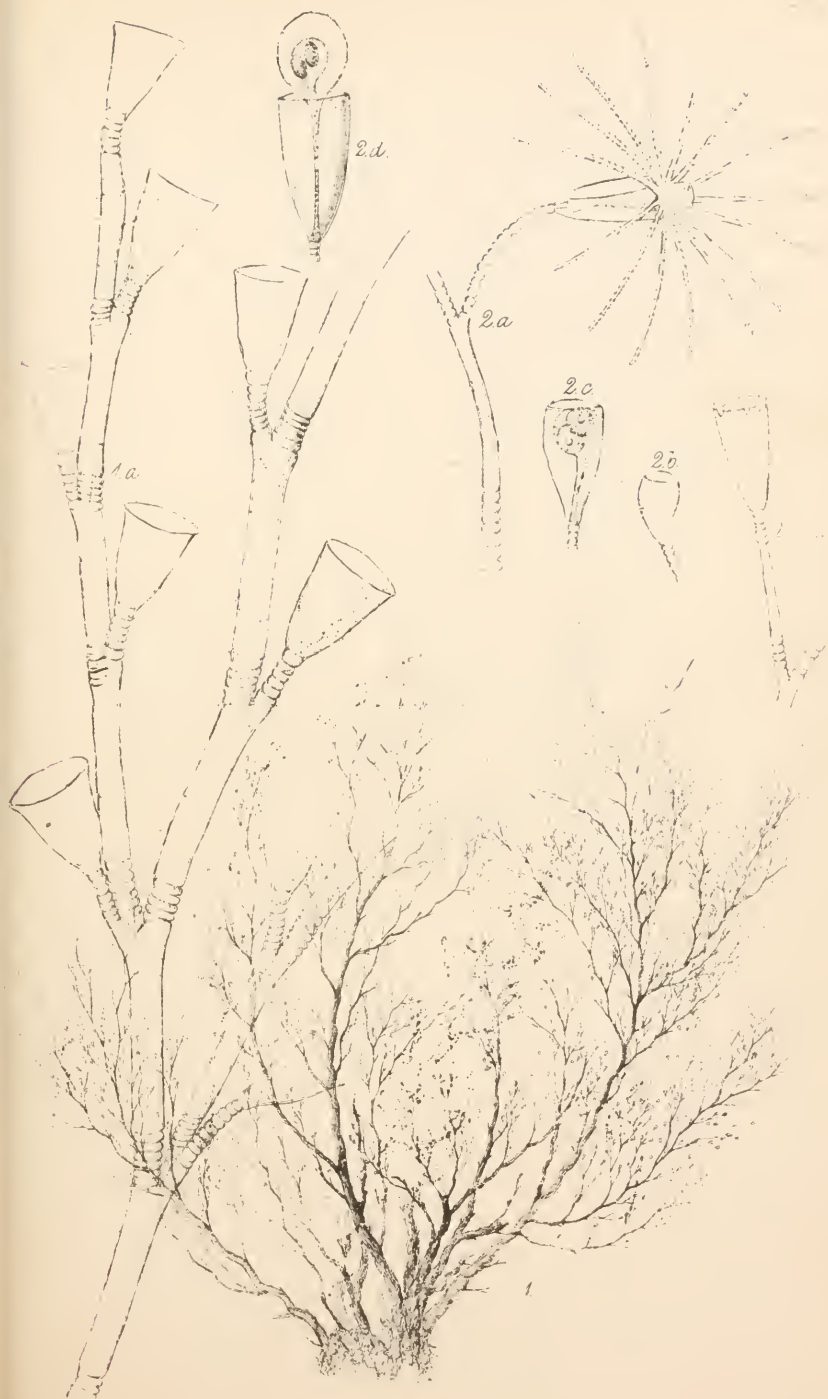
FIG.

1. *OBELIA FLICATA*, p. 159, nat. size. From a drawing by Mr. Tuffen West.

1 *a*. A shoot, magnified (T. H.).

2. *CAMPANULARIA NEGLECTA*, p. 171, a single calyche, magnified.

2 *a*. A portion, magnified, showing the polypite. From drawings by Mr. Alder.—2 *b*, 2 *c*. The gonotheca, magnified (T. H.).—2 *d*. The same, with extra-capsular marsupium (T. H.).



Tuffen West. sculp.

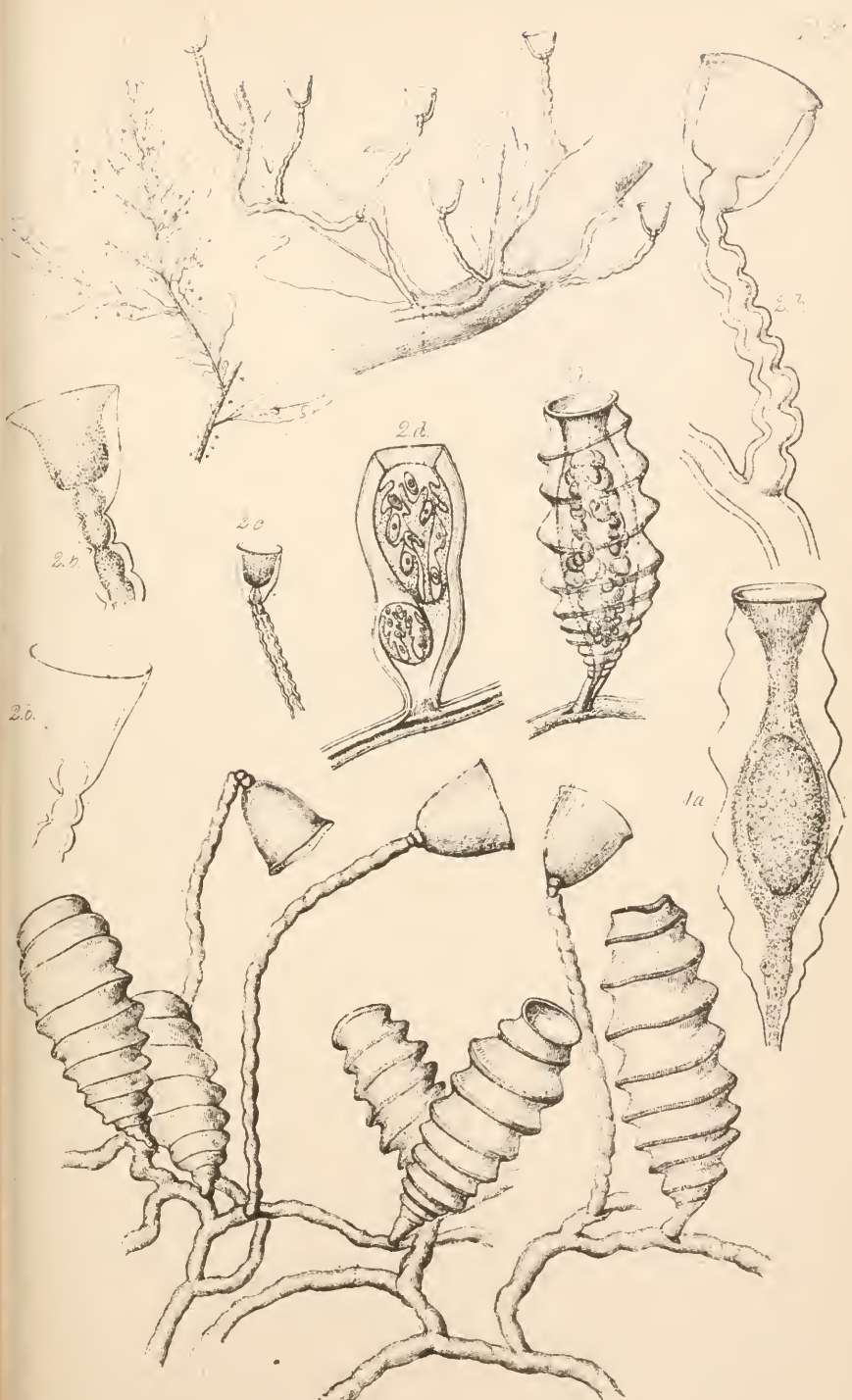
W. West imp.

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PLATE XXXI.

FIG.

1. *CAMPANULARIA INTEGRA*, p. 163, magnified. After Tuffen West.
1 *a*, 1 *b*. The gonotheca, magnified to show the internal structure (T. II.).
2. *CAMPANULARIA CALICULATA*, p. 164, on red weed, nat. size.
2 *a*. The same, magnified.—2 *b*. Calyces, highly magnified to show the structure and differences in shape. After Tuffen West.—2 *c*. A calycle, drawn to the Author's scale for comparison with other species (T. II.).—2 *d*. The gonotheca, magnified. After Allman.



Tuften. West sculp.

W. West imp.

London. John Van Voorst MDCCCLXIX.



PLATE XXXII.

FIG.

1. *CAMPANULARIA VERTICILLATA*, p. 167, nat. size. From a drawing by Mr. Tuffen West.
- 1 *a*. The same, magnified (T. H.).
2. *LOVENELLA CLAUSA*, p. 177, magnified. From a drawing by the Author.
3. *CAMPANULARIA?* *FRAGILIS*, p. 175, nat. size.
- 3 *a*. A shoot of the same, magnified.—3 *b*. A single caly-
ele, more highly magnified. From drawings by
the Author.



Tuffen West sculp.

W. West imp.

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PLATE XXXIII.

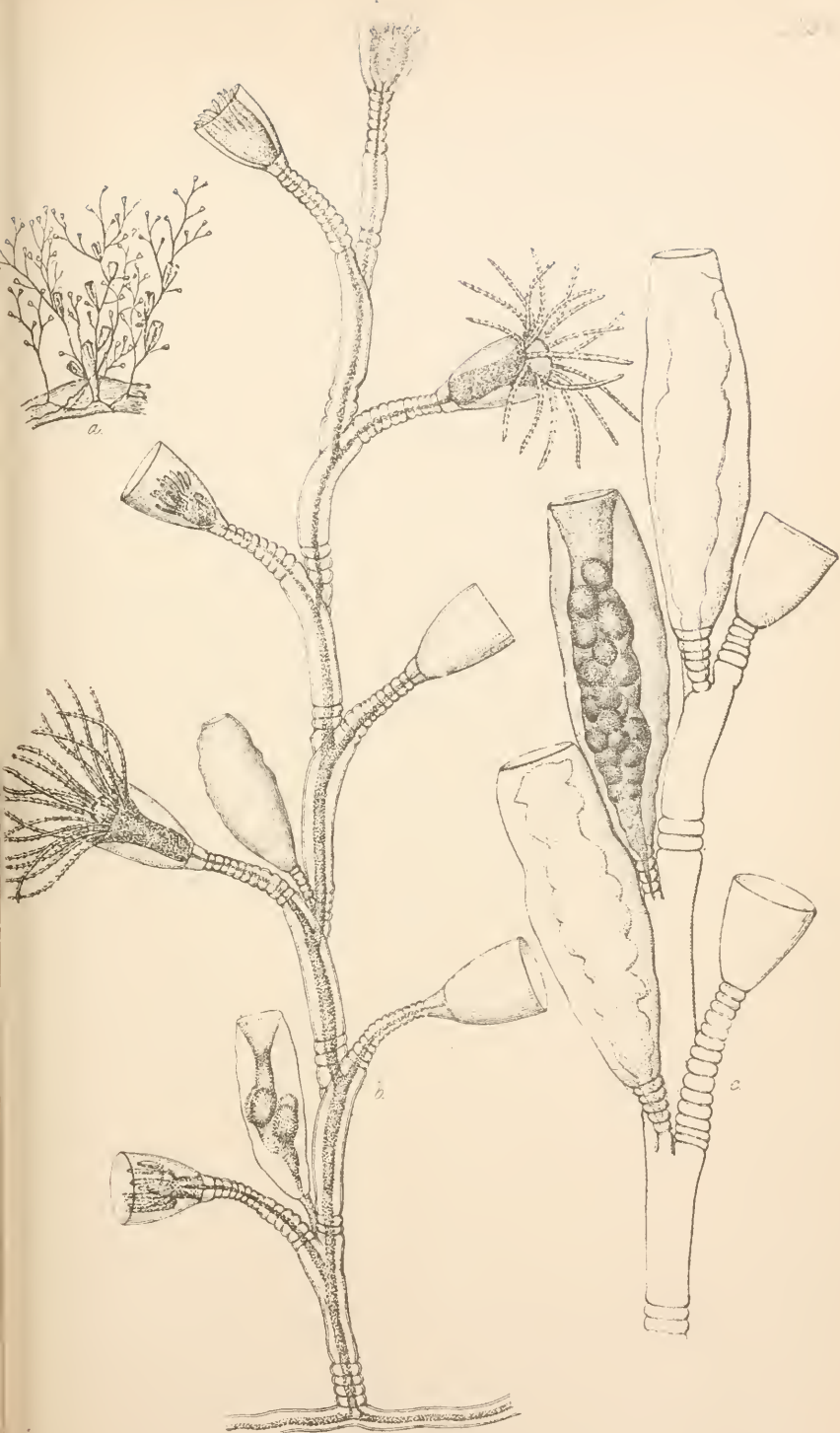
FIG.

CAMPANULARIA FLEXUOSA, p. 168.

a. Natural size.

b. A shoot, magnified, bearing male capsules.

c. A shoot with female capsules.



ften West. sculp.

W. West imp.

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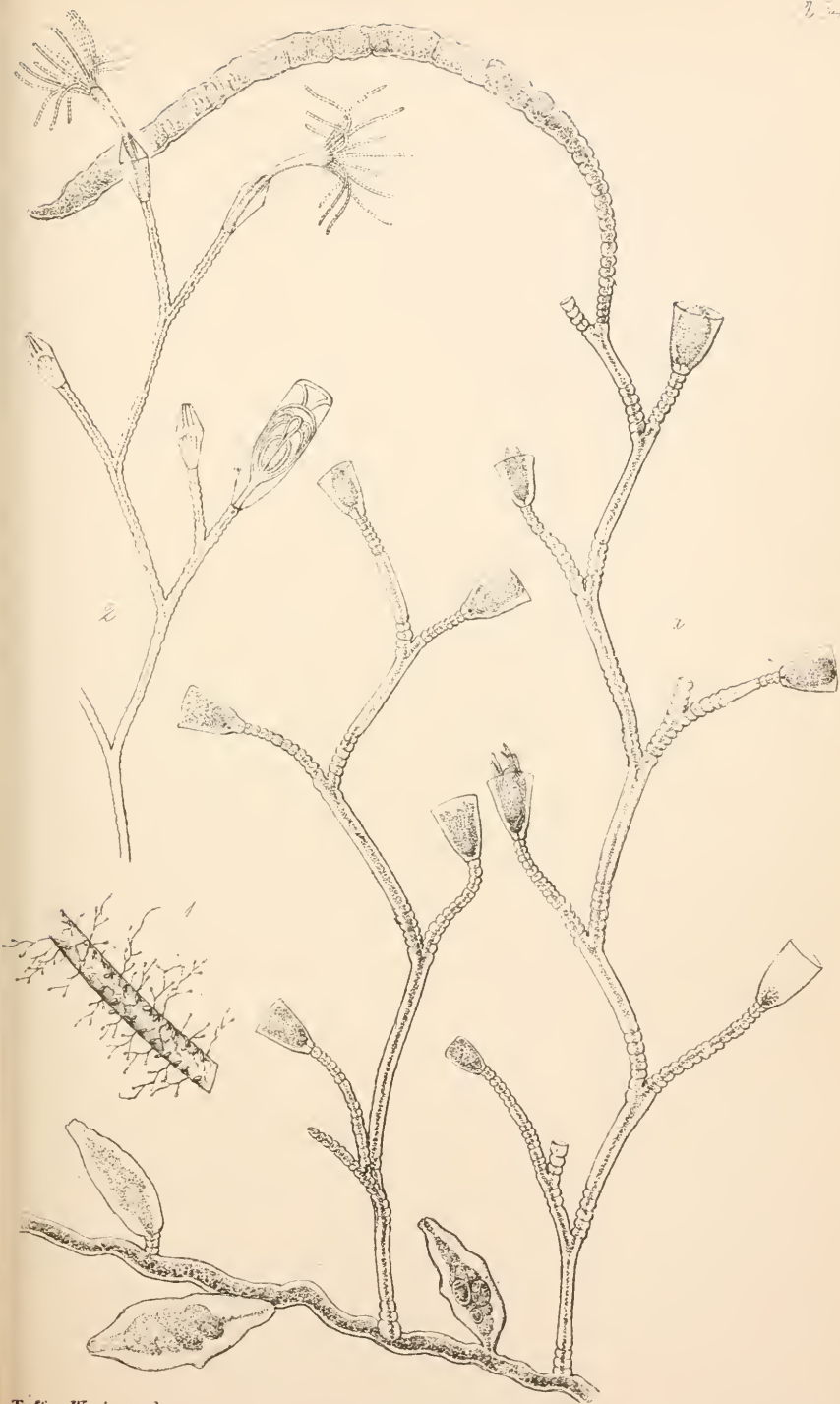
PLATE XXXIV.

FIG.

1. *CAMPANULARIA ANGULATA*, p. 170, nat. size.

1 *a*. A portion, magnified. After Tuffen West.

2. *LEPTOSCYPHUS TENUIS*, p. 197, magnified. From a
drawing by Prof. Allman.



Tuften West. sculp.

W. West imp.

PLATE XXXV.

FIG.

1. *CAMPANULARIA?* *GIGANTEA*, p. 174, nat. size.

1 *a*, 1 *b*. Calyces magnified. These two figures are drawn to the same scale.

2. *GONOTHYRÆA?* *HYALINA*, p. 184, nat. size.

2*a*. A shoot, magnified.



Tuften West sculp.

W. West imp.

PLATE XXXVI.

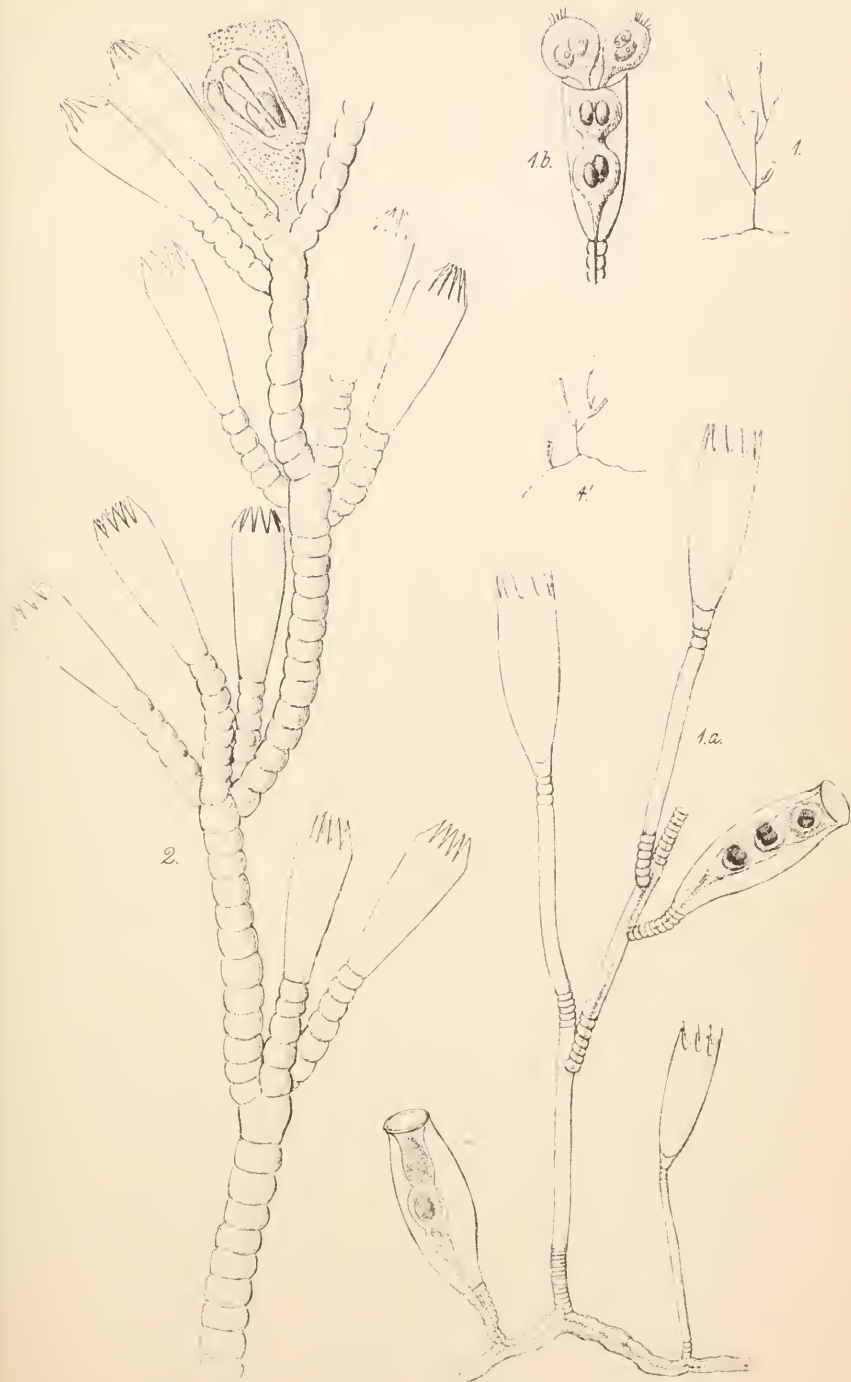
FIG.

1. GONOTHYRÆA GRACILIS, p. 183, nat. size.

1 *a*. The same, magnified. From drawings by the Author.

1'. G. GRACILIS, nat. size. After Sars.—1 *b*. The gonotheca (female). After Sars.

2. CAMPANULINA TURRITA, p. 190, magnified. From a drawing by Prof. Wyville Thomson.



Tuffen West. sculp.

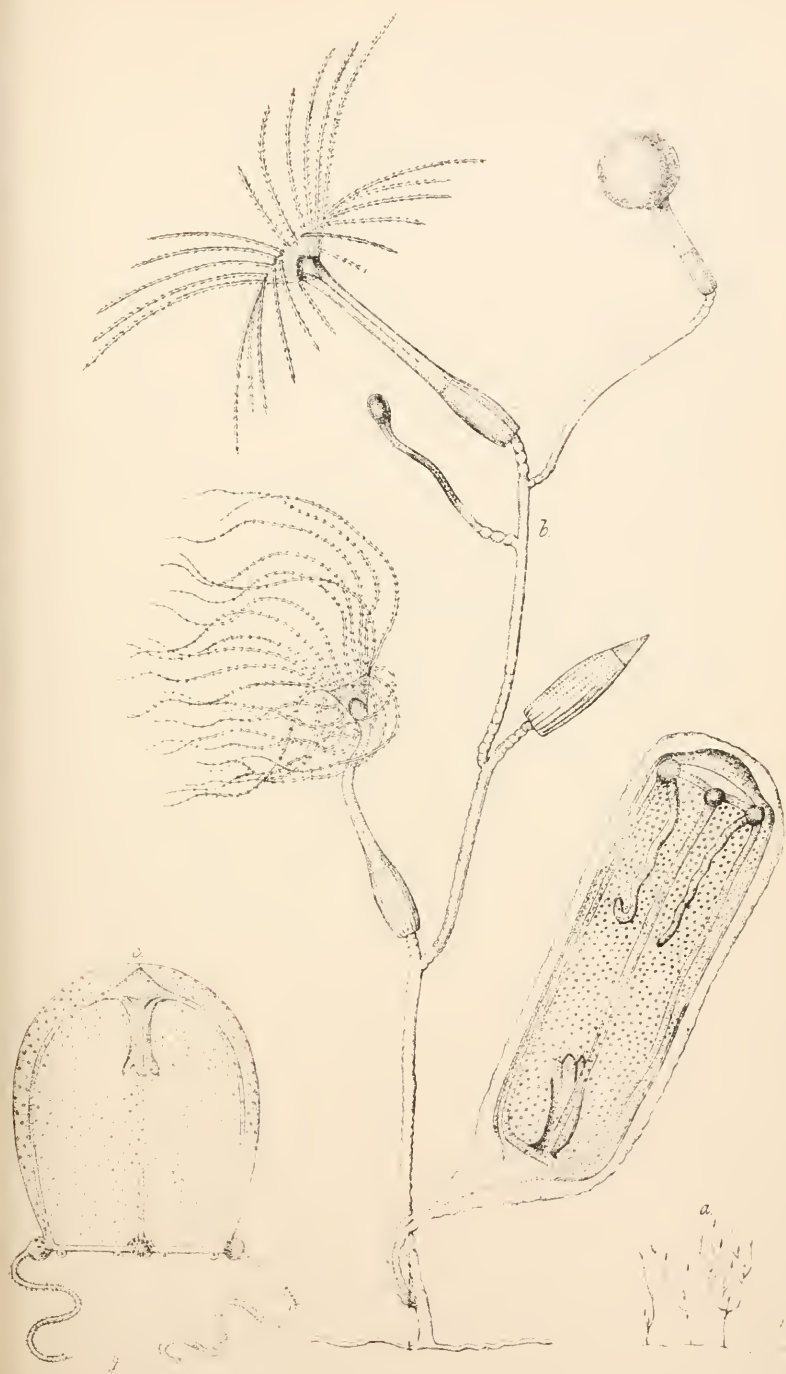
W. West imp.

PLATE XXXVII.

FIG.

CAMPANULINA ACUMINATA, p. 187.

a. Nat. size.—*b.* A shoot, magnified.—*c.* The gonozoid.
After Dr. Strethill Wright.



Tuffen West sculp.

W. West imp.

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PLATE XXXVIII.

FIG.

1. *CAMPANULINA REPENS*, p. 189, magnified.

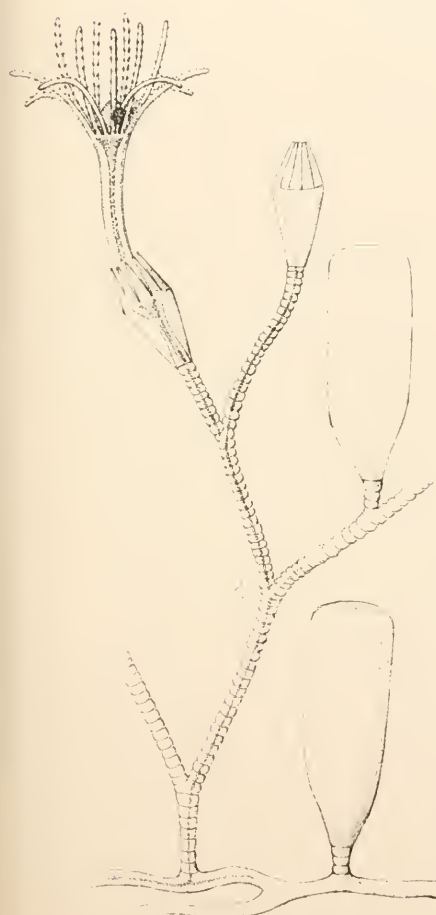
1 *a*. The gonozooid. From drawings by Prof. Allman.

2. *ZYGODACTYLA VITRINA*, p. 192, the polypites, magnified.
After Wright.

2 *a*. The gonozooid. After Gosse.—2 *b*. The oral extremity of the manubrium, magnified, showing the fimbriated lips. After Gosse.



2a.



Tuffen West. sculp.

W. West imp.

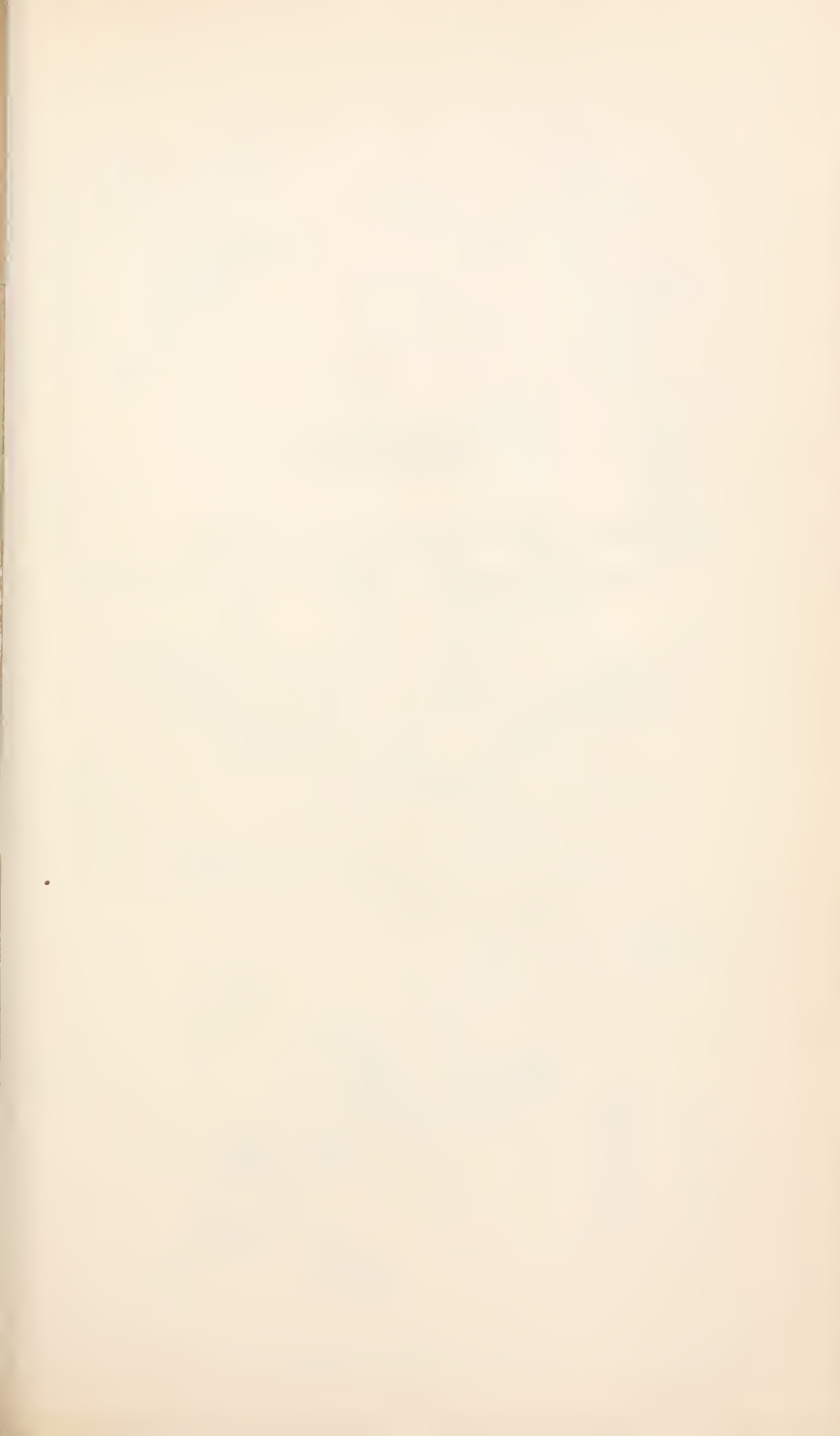


PLATE XXXIX.

FIG.

1. OPERCULARELLA LACERATA, p. 194, nat. size.

1*a*. A shoot, magnified. The Author.—1*b*, 1*c*. The male capsules. After Wright.

2. CALYCELLA SYRINGA, p. 206, nat. size.

2*a*. The same, magnified.

3. CALYCELLA FASTIGIATA, p. 208, nat. size.

3*a*. The same, magnified.

4. CUSPIDELLA HUMILIS, p. 209, magnified to the same scale as the preceding.

4*a*. The same, more highly magnified.



Tuften West sculp.

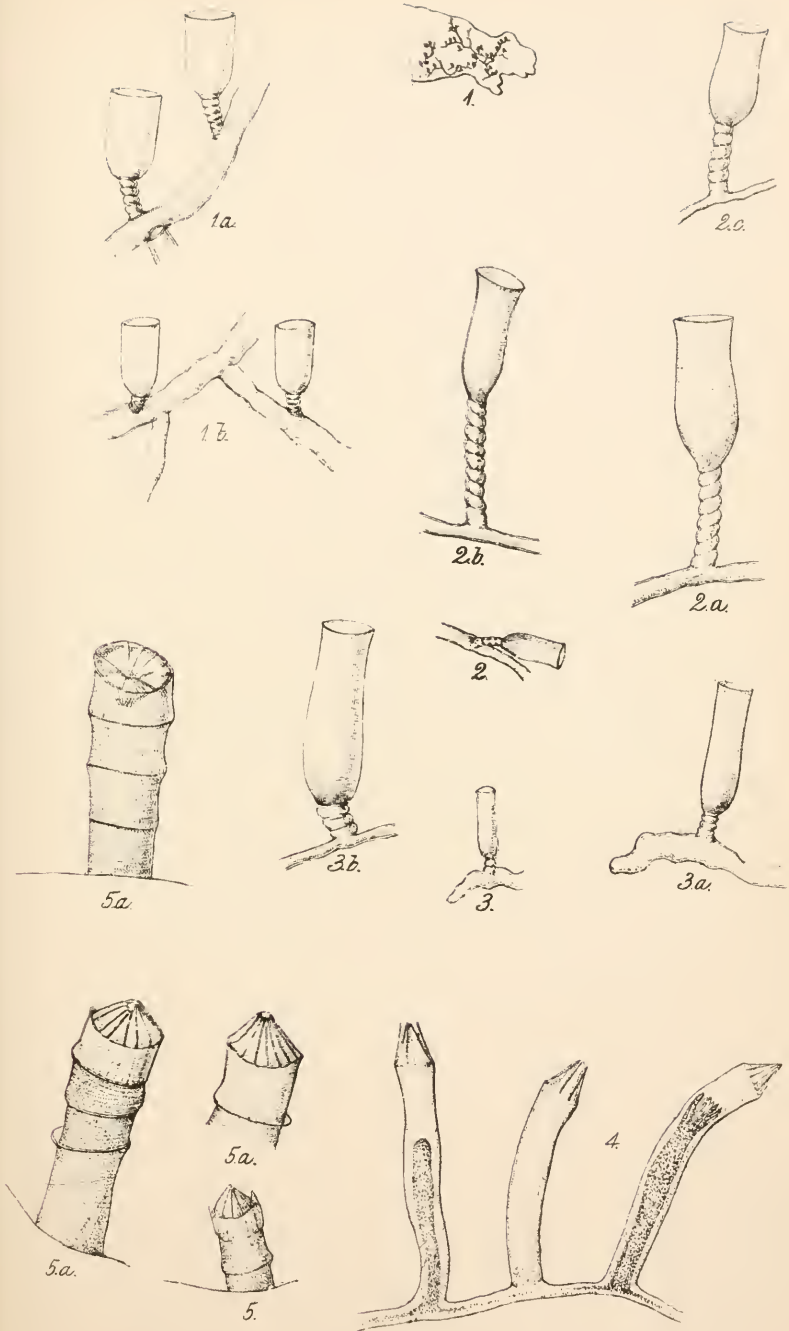
W. West imp.

PLATE XL.

FIG.

1. *LAFOËA PARVULA*, p. 203, nat. size.
1 *a*, 1 *b*. The same, magnified. After Tuffen West.
2. *LAFOËA POCILLUM*, p. 204, magnified.—2 *a*, 2 *b*, 2 *c*. The same, more highly magnified.
3. *LAFOËA PYGMÆA*, p. 205, magnified.
3 *a*, 3 *b*. The same, more highly magnified.
4. *CUSPIDELLA GRANDIS*, p. 210, highly magnified*.
5. *CUSPIDELLA COSTATA*, p. 210, drawn to the same scale as *CUSPIDELLA GRANDIS*.
5 *a*. The same, more highly magnified.

* This figure is drawn to the same scale as the larger figure (4 *a*) of *CUSPIDELLA HUMILIS* on Plate XXXIX.



Tuffen West sculp.

W. West imp

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PLATE XLI.

FIG.

1. *LAFOËA DUMOSA*, p. 200, magnified.

1 *a*. The same, a single calycle, more highly magnified (T. H.)

2. *LAFOËA FRUTICOSA*, p. 202, nat. size. After Alder.

2 *a*. A portion, magnified (T. H.).—2 *b*. The northern form of *L. fruticosa*, magnified (T. H.).

3. *SALACIA ABIETINA*, p. 212, nat. size.

3 *a*. The same, magnified.—3 *b*. A portion of the stem, more highly magnified. After Alder.

4. *FILELLUM SERPENS*, p. 214, magnified.

4 *a*. A group of calycles. From drawings by Mr. Alder.—

4 *b*. A single calycle. From a sketch by Mr. Busk.

5. *COPPINIA ARCTA*, p. 219, nat. size. From a drawing by the Author.



Tuften West sculp.

W West imp

PLATE XLII.

FIG.

HALECIUM HALECINUM, p. 221.

a, a'. Nat. size. From drawings by Mr. T. West.

b. A portion, magnified, showing the polypites.

c. Capsules with male gonophores.

d. Capsules with female gonophores. From drawings by
the Author.



Tufter West. sculp.

W. West imp.

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PLATE XLIII.

FIG.

1. *HALECIUM MURICATUM*, p. 223, nat. size. From a drawing by Mr. T. West.

1 *a*. Portions, magnified (T. H.).—1 *b*. Gonothea (T. West).

2. *HALECIUM BEANII*, p. 224, nat. size. From a drawing by Mr. Tuffen West.

2 *a*. Portions, magnified.—2 *b*. A branch with male capsules.—2 *c*. A branch with female capsules. From drawings by the Author.



T. West sculp

W. West imp.

PLATE XLIV.

FIG.

1. *HALECIUM LABROSUM*, p. 225, nat. size.

1 *a*. A portion, magnified, with male capsules. After Alder.

2. *HALECIUM SESSILE*, p. 229, nat. size.

2 *a*. A portion, magnified, showing the great length of the polypite. From drawings by Mr. Alder.

3. *HALECIUM BEANII* (?), p. 324 (Appendix), nat. size.

3 *a*. A portion of the stem, enlarged.—3 *b*. A capsule.—

3 *c*. A single calyele, more highly magnified. From drawings by the Author.



Tuffen West. sculp.

W. West imp.

PLATE XLV.

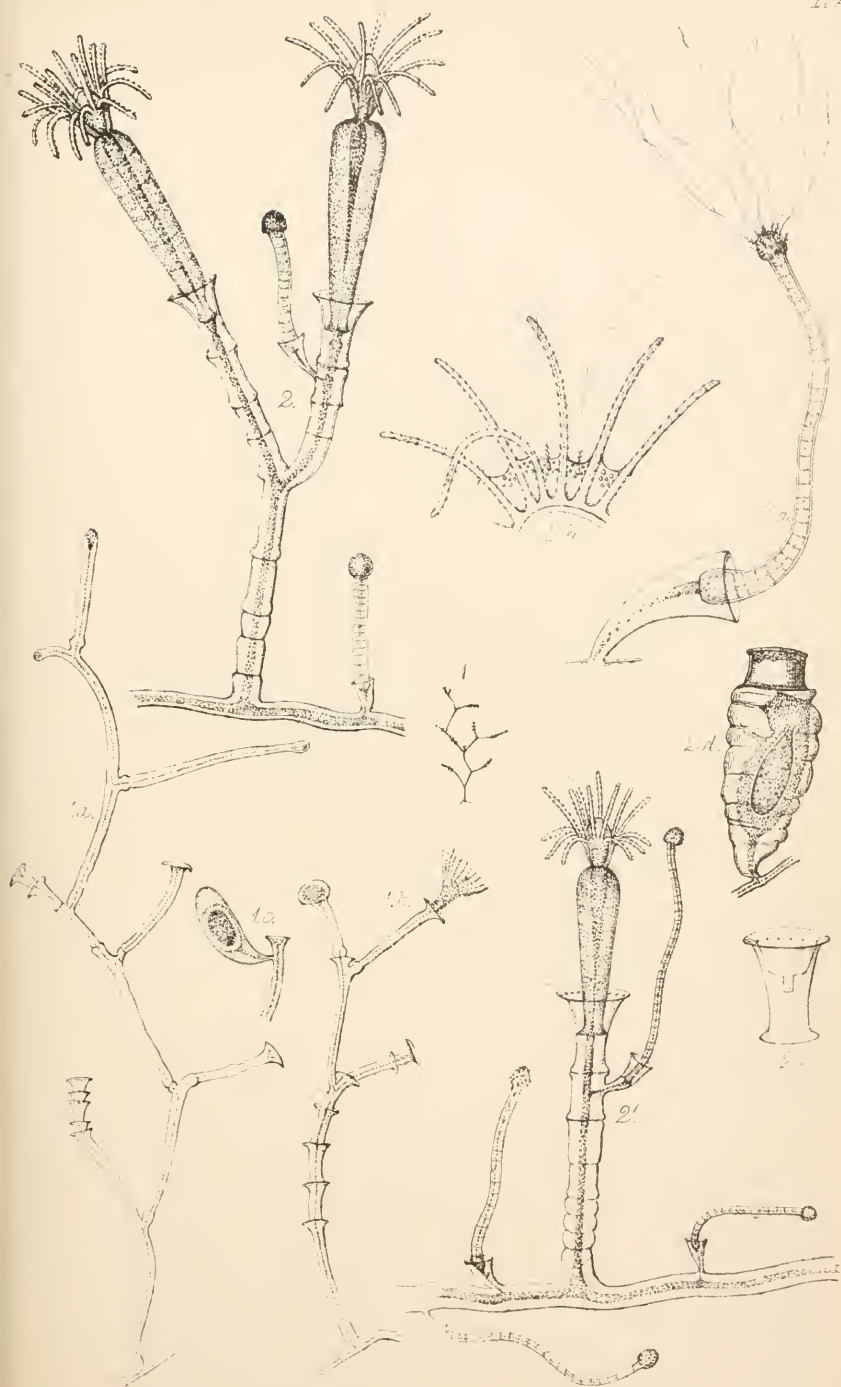
FIG.

1. *HALECIUM TENELLUM*, p. 226, nat. size.

1 *a*, 1 *b*. Portions, magnified.—1 *c*. The gonotheca.

2, 2'. *OPHIODES MIRABILIS*, p. 231, magnified.

2 *a*. One of the snake-like appendages.—2 *b*. A portion of the intertentacular web, with clusters of thread-cells between the arms.—2 *c*. A calycle, magnified, showing the diaphragm on which the polypite rests.—2 *d*. The gonotheca.



Tuffen West sculp.

W. West imp.

PLATE XLVI.

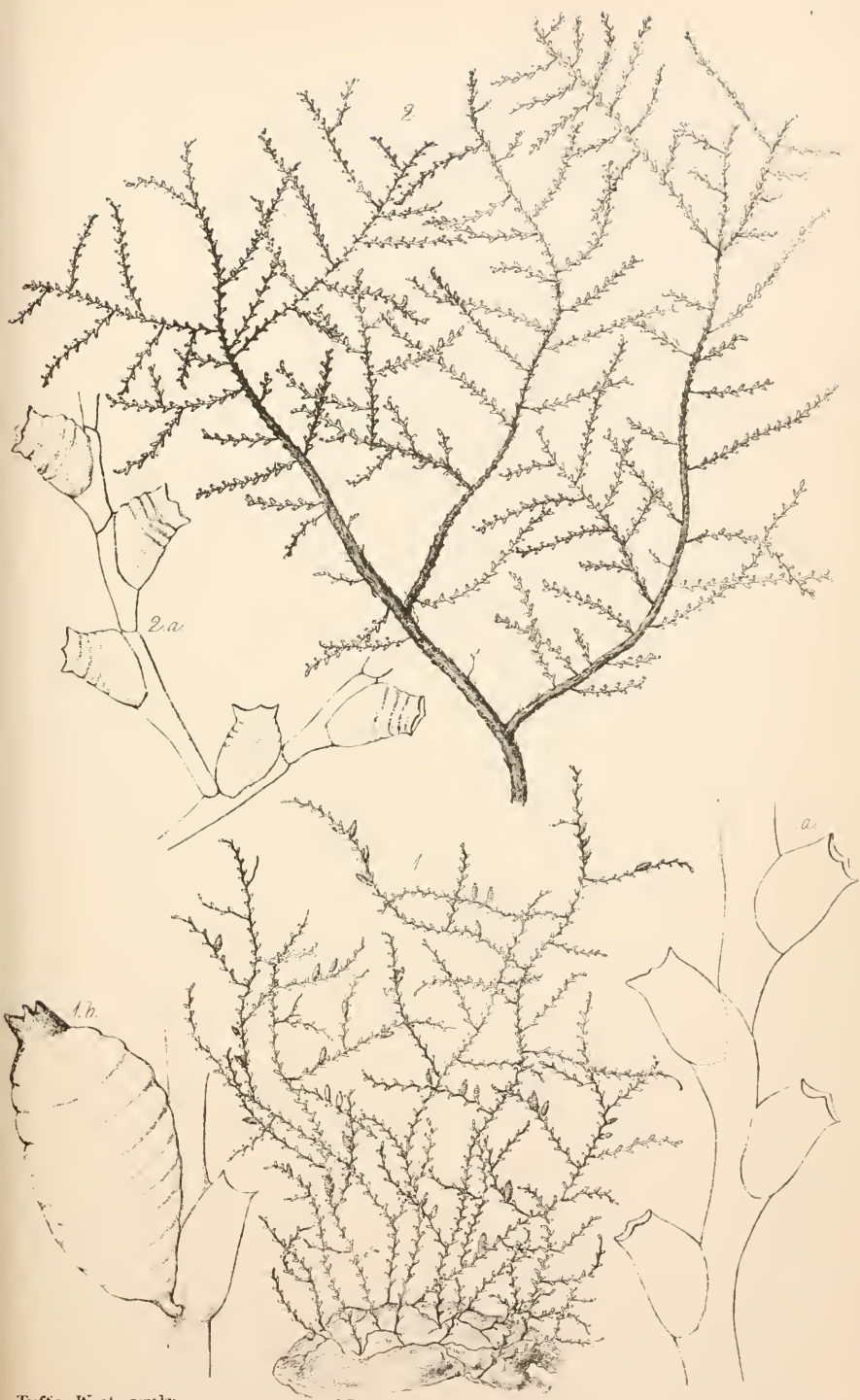
FIG.

1. SERTULARELLA POLYZONIAS, p. 235, nat. size. From a drawing by Mr. T. West.

1 *a*. A portion, magnified (T. H.).—1 *b*. The gonotheca (T. H.).

2. SERTULARELLA GAYI, p. 237, nat. size.

2 *a*. A portion, enlarged. From drawings by Mr. Alder.



Tuften West sculp.

W. West imp.

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PLATE XLVII.

FIG.

1. *SERTULARELLA TRICUSPIDATA*, p. 239, nat. size.

1 *a*. The same, enlarged. After Alder.

2. *SERTULARELLA RUGOSA*, p. 241, nat. size.

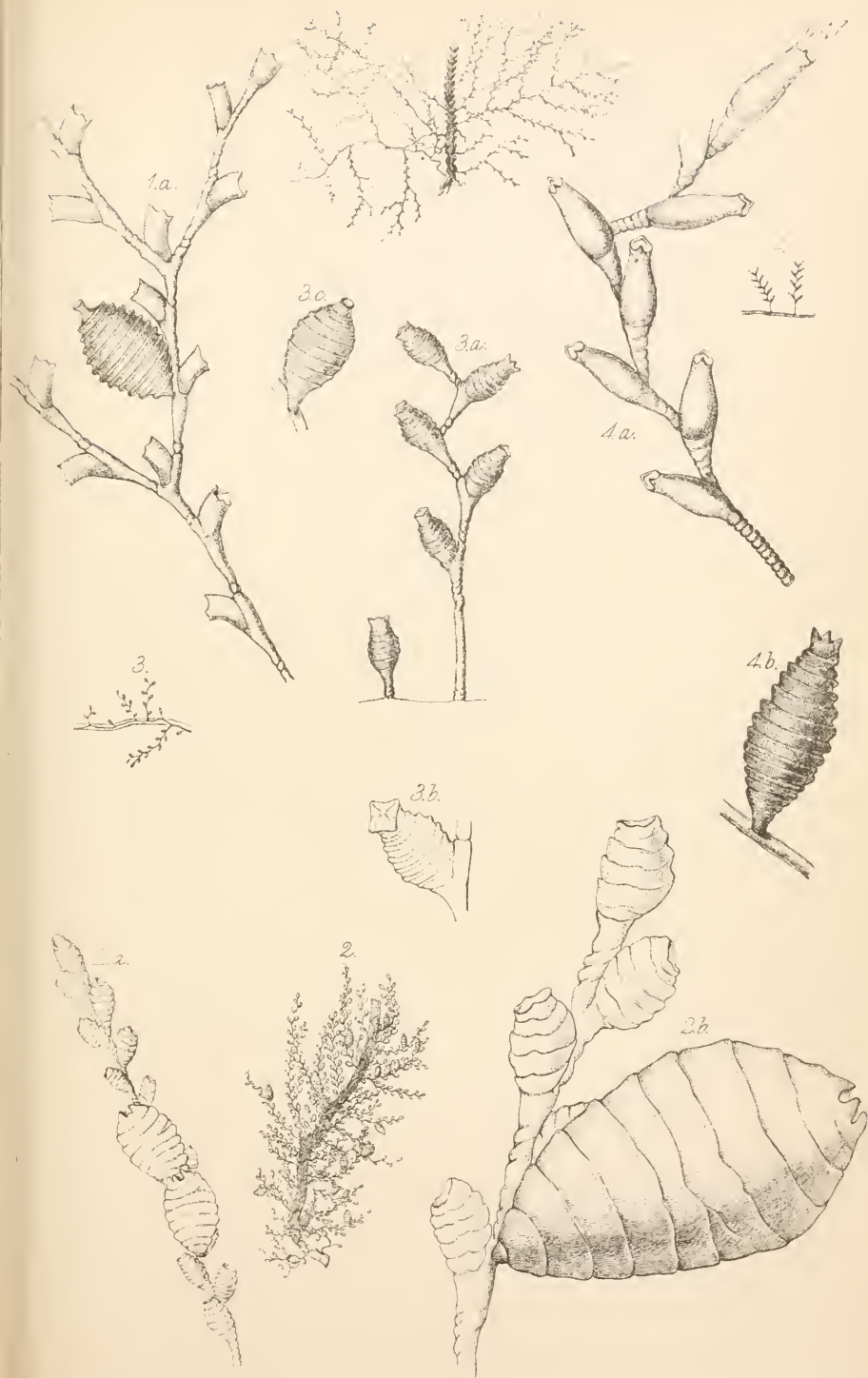
2 *a*. The same, magnified.—2 *b*. A portion, more highly magnified. From drawings by Mr. Tuffen West.

3. *SERTULARELLA TENELLA*, p. 242, nat. size.

3 *a*. The same, magnified.—3 *b*. A single calycle, more highly magnified.—3 *c*. The gonotheca. After Alder.

4. *SERTULARELLA FUSIFORMIS*, p. 243, nat. size.

4 *a*. A portion, magnified.—4 *b*. The gonotheca. From drawings by the Author.



Tuften West sculp.

W. West imp.

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PLATE XLVIII.

FIG.

1. *DIPHASIA ROSACEA*, p. 245, nat. size.

1 *a*. A portion with male capsules, magnified. From drawings by Mr. Tuffen West.—1 *b*. Female capsule, magnified (T. H.). Ditto, more highly magnified to show the gonophores and internal marsupium (T. H.).—1 *c*. A capsule in an early stage of development (T. H.).

2. *DIPHASIA ALATA*, p. 258, nat. size.

2 *a*. A branch, magnified. — 2 *b*. The capsule (male). After Tuffen West.



Tuften West sculp.

W. West imp.



PLATE XLIX.

FIG.

1. *DIPHASIA ATTENUATA*, p. 247, nat. size.

1 *a*. Part of a branch, magnified.—1 *b*. The male capsule.
1 *c*. The female capsule.—1 *d*. One of the tendril-
like extremities of the shoots.

2. *DIPHASIA FALLAX*, p. 249, nat. size.

2 *a*. Part of a branch, magnified.—2 *b*. The capsule (female).



Tuften West. sculp.

W. West mp



PLATE L.

FIG.

1. *DIPHASIA PINASTER*, p. 252, nat. size.

1 *a*. A portion bearing a male capsule, magnified.—1 *b*. The female capsule, magnified.

2. *SERTULARIA FUSCA*, p. 272, nat. size.

2 *a*. Calyces, magnified.—2 *b*. Gonothecæ. The last figure is after Johnston.



Tuffen West. sculp.

W. West. imp

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PLATE LI.

FIG.

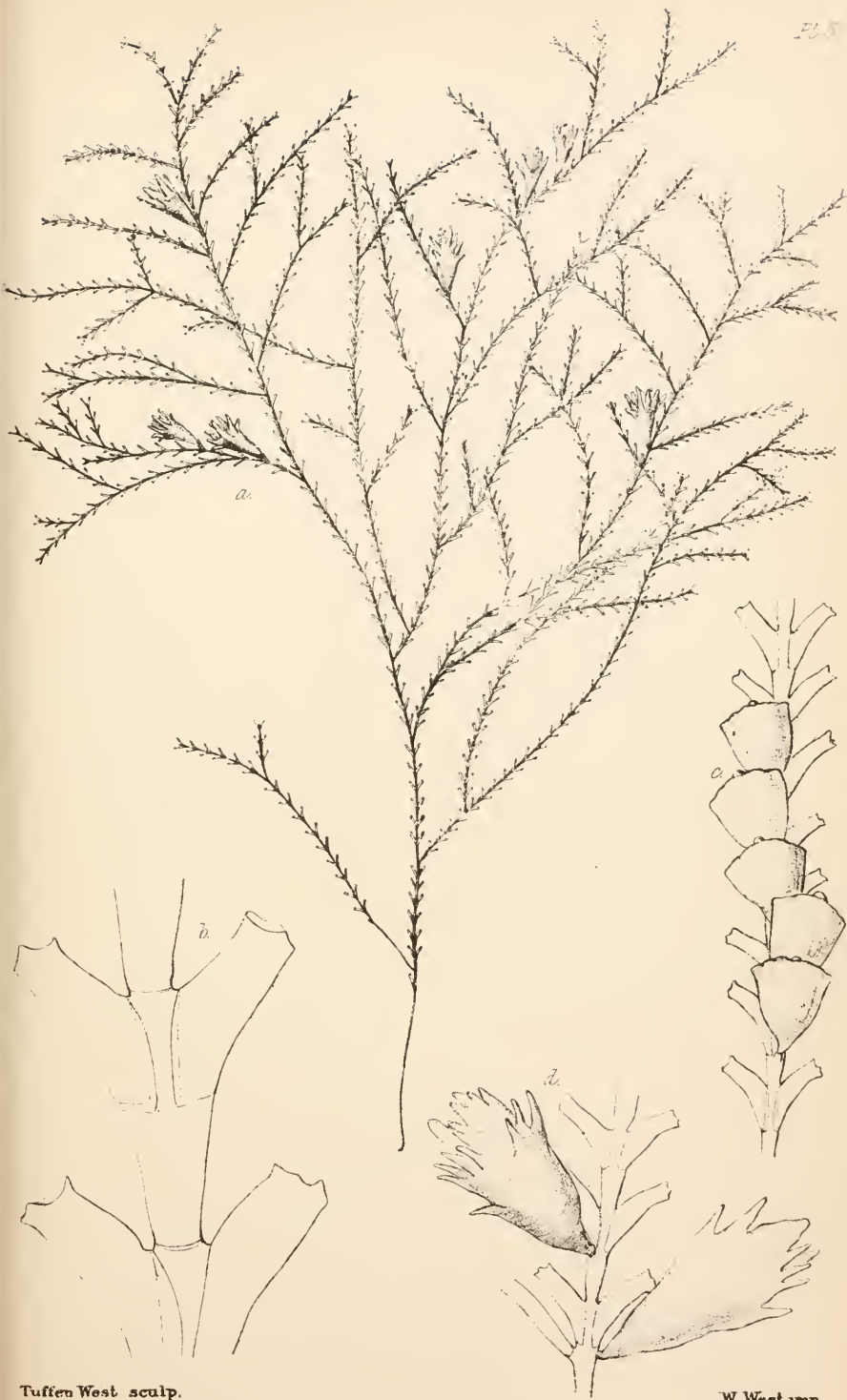
DIPHASIA TAMARISCA, p. 254.

a. Natural size.

b. Calyeles, magnified.

c. A branch with male capsules.

d. A branch with female capsules.



Tuffen West sculp.

W. West imp.

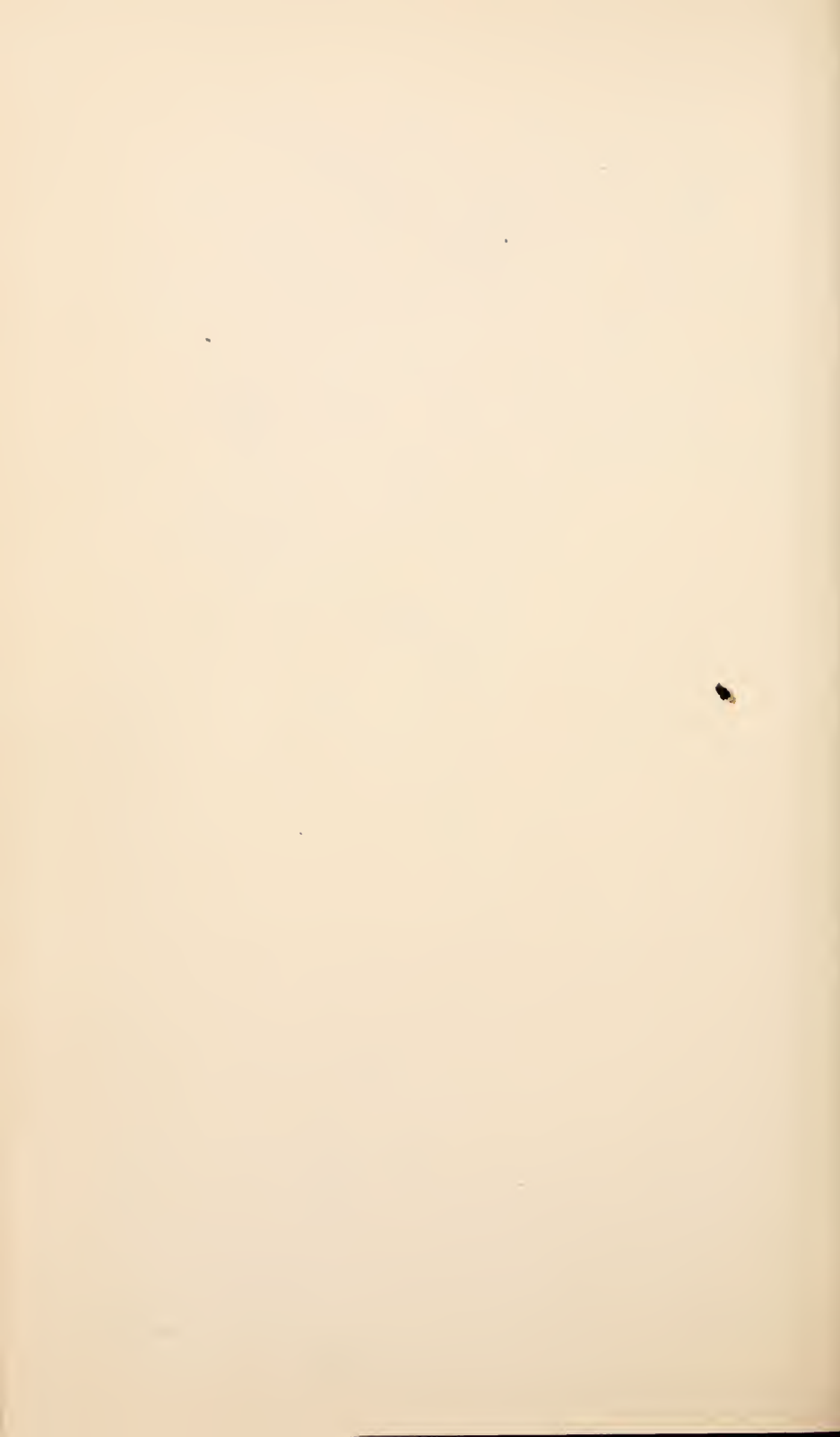


PLATE LII.

FIG.

DIPHASIA PINNATA, p. 255.

a. Natural size (male).

b. Ditto (female).

c. Calyces, magnified.

d. Male capsule.

e. Female capsule.

From drawings by Mr. Tuffen West.



Tuffen West. sculp.

W. West. imp

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PLATE LIII.

FIG.

1. *SERTULARIA PUMILA*, p. 260, nat. size.

1 *a*. Portion, magnified.—1 *b*. The capsule, magnified.—
1 *c*. The same, in a more advanced stage, with the
external marsupium. After Lindström. The other
figures are by the Author.

2. *SERTULARIA GRACILIS*, p. 262, nat. size.

2 *a*, 2 *a'*. Portions, enlarged.—2 *b*. The capsule. From
drawings by the Author.

3. *SERTULARIA FILICULA*, p. 264, nat. size. From a draw-
ing by Mr. T. West.

3 *a*. Portion, magnified (T. H.).—3 *b*. The capsule. After
Ellis.



Tuffen West sculp.

W. West imp.

PLATE LIV.

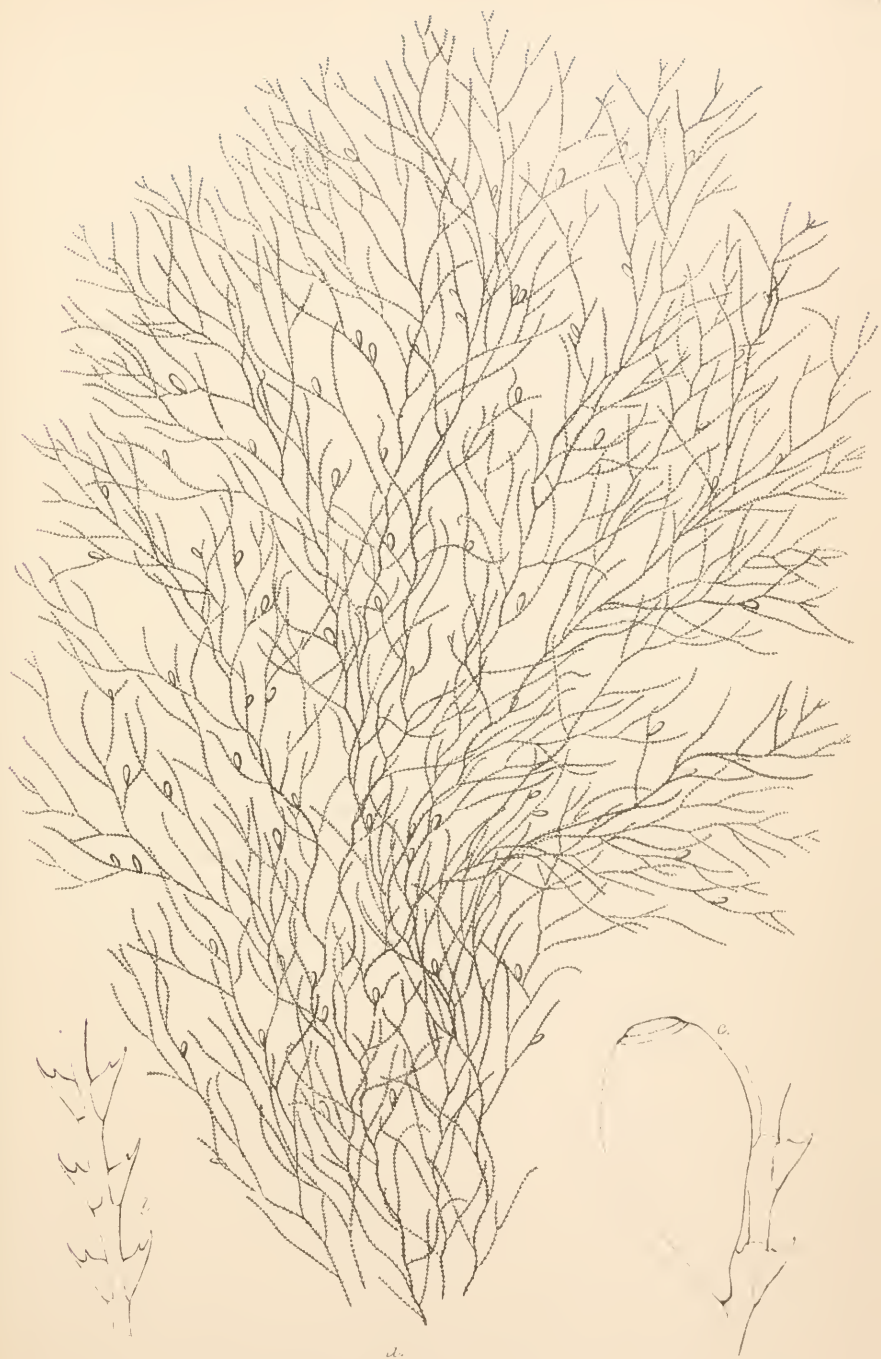
FIG.

SERTULARIA OPERCULATA, p. 263.

a. Nat. size. From a drawing by Mr. Tuffen West.

b. Calyces, magnified (T. H.).

c. The capsule (T. H.).



Tuften West sculp.

W. West imp.

PLATE LV.

FIG.

SERTULARIA ABIETINA, p. 266.

a. Nat. size.

b. A portion, somewhat enlarged. From drawings by Mr.
Tuffen West.

c. Calycles, magnified (T. H.).

d. The capsule (T. H.).



Tuften West sculp.

W. West imp.

PLATE LVI.

FIG.

SERTULARIA ARGENTEA, p. 268.

- a.* Nat. size. From a drawing by Mr. Tuffen West.
b. A young specimen.—*c, c'.* Calyces and capsule, magnified. From drawings by the Author.



Tuffen West. sculp.

W. West. imp.

London, John Van Voorst MDCCLXIX



PLATE LVII.

FIG.

SERTULARIA CUPRESSINA, p. 270.

a. Nat. size. From a drawing by Mr. T. West.

b, b'. Calyces and capsule, magnified (T. H.).



Tuffen West. sculp.

W. West. imp.

London. Jhr Van Voorst MDCCCLXIX



PLATE LVIII.

FIG.

HYDRALLMANIA FALCATA, p. 273.

- a.* Nat. size. From a drawing by Mr. T. West.
b. Calyces, magnified.—*c.* Calyces from a young specimen.—*d.* The capsule. By the Author.



Tuffen West: sculp.

W. West imp.

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PLATE LIX.

FIG.

THUIARIA THUIA, p. 275.

- a.* Nat. size. From a drawing by Mr. Tuffen West.—*b, b'*. Calyces, enlarged (T. H.).—*c.* A group of capsules, magnified (T. H.).—*d.* The crust from which the shoot rises (T. W.).



Tuffen West. sculp.

W. West. imp.

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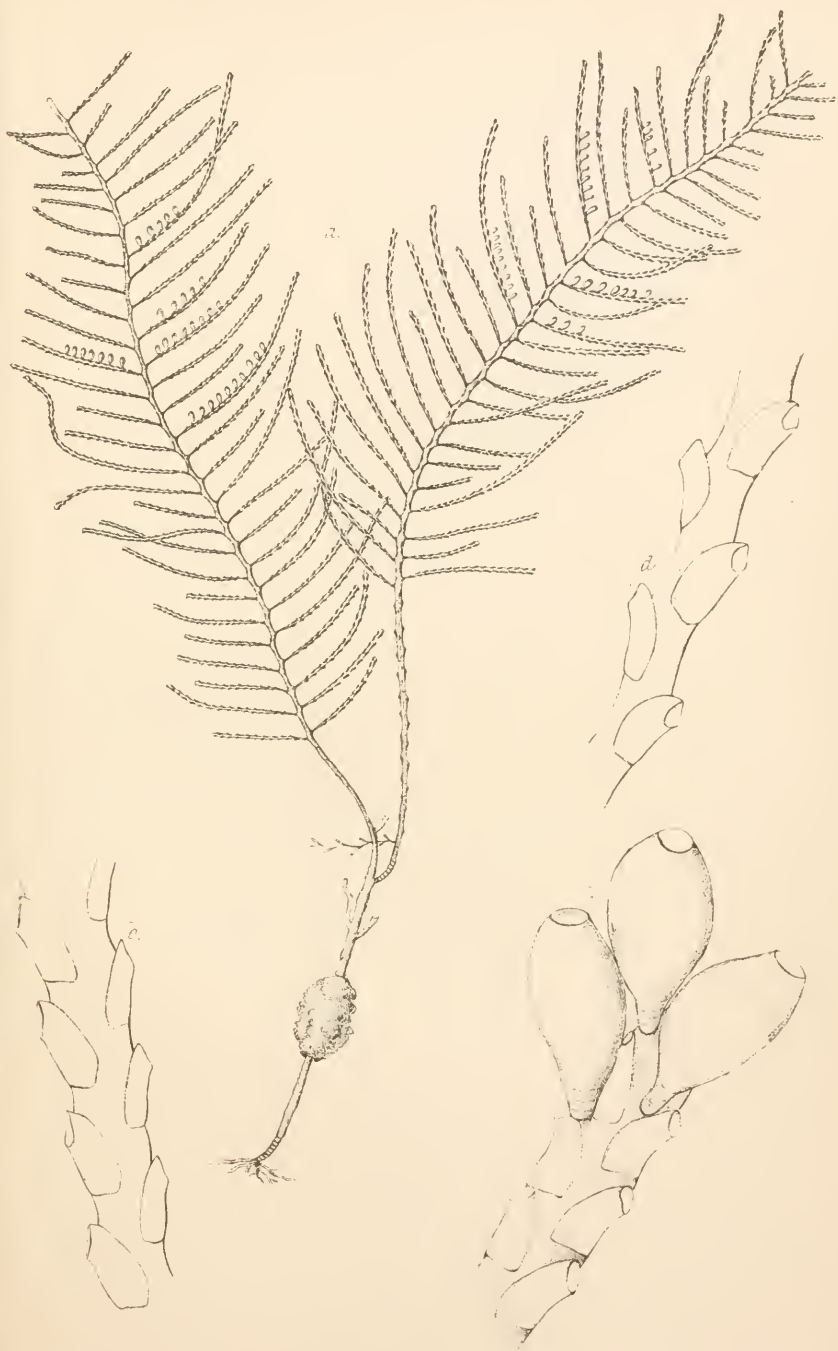


PLATE LX.

FIG.

THUIARIA ARTICULATA, p. 277.

a. Nat. size.—*b.* Calycles, magnified.—*c.* A group of capsules, magnified.—*d.* A portion of the stem of the Shetland variety. (*Vide* p. 278.)



Tuffen West sculp.

W. West imp.

London John Van Voorst MDCCCLXIX.



PLATE LXI.

FIG.

ANTENNULARIA ANTENNINA, p. 280.

a, b. Nat. size. From drawings by Mr. T. West.—*c.* A portion magnified to show the form of the calyces and arrangement of the nematophores (T. H.).—*d, d'.* The capsule (T. H.).—*e.* A section of the stem, showing the verticillate arrangement of the branchlets (T. W.).



Tuffen West sculp.

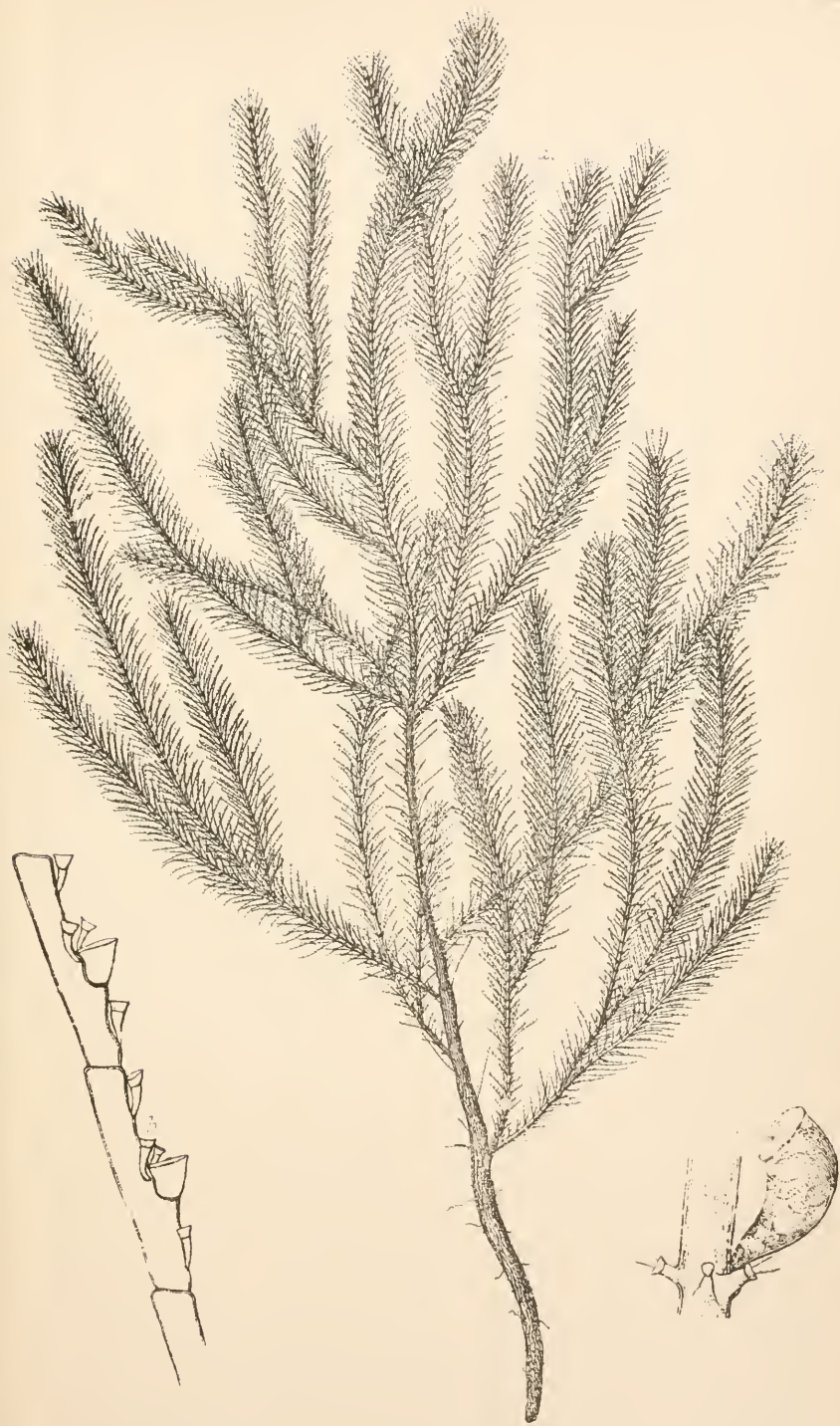
W. West imp.

PLATE LXII.

FIG.

ANTENNULARIA RAMOSA, p. 282.

- a.* Nat. size. From a drawing by Mr. T. West.—*b.* Portion, magnified (T. H.).—*c.* The capsule (T. H.).



Tuffen West. sculp.

W West. imp.

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PLATE LXIII.

FIG.

1. *AGLAOPHENIA PLUMA*, p. 286, nat. size.

1 *a*. *AGLAOPHENIA PLUMA*, var. β , nat. size. From drawings by Mr. T. West.—1 *b*. A calycle, magnified (T. H.).

2. *AGLAOPHENIA TUBULIFERA*, p. 288, nat. size. From a drawing by the Author.

2 *a*, 2 *b*. Side and front views of the calycle (T. W.).

3. *AGLAOPHENIA PENNATULA*, p. 292, nat. size.

3 *a*. Calyces, enlarged. From drawings by the Author.



Tuffen West sculp.

W. West ump

PLATE LXIV.

FIG.

1. *HALECIUM PLUMOSUM*, p. 227, nat. size.

1 *a*. Portion, magnified.—1 *b*. A calycle, more highly magnified. From drawings by the Author.

2. *AGLAOPHENIA MYRIOPHYLLUM*, p. 290, nat. size. From a drawing by Mr. T. West.

2 *a*. A single calycle, magnified (T. H.).

3. The *corbula* of *AGLAOPHENIA TUBULIFERA*, magnified. From a drawing by the Author.



Green nest sculp.

W. West. imp

London, John Van Voorst MDCCCLXIX

PLATE LXV.

FIG.

1. *PLUMULARIA PINNATA*, p. 295, nat. size.

1 *a*. Portion of a pinna, magnified.—1 *b*. Capsules, magnified.

2. *PLUMULARIA ECHINULATA*, p. 302, nat. size.

2 *a*. Stem and pinnæ, magnified.—2 *b*. A piece of the creeping stolon with capsules, magnified.

3. *PLUMULARIA SIMILIS*, p. 303, nat. size.

3 *a*. Stem and pinnæ, magnified.—3 *b*. Capsule*.

* This figure is drawn to a larger scale than the rest.



Tuffen West sculp.

W West imp.

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PLATE LXVI.

FIG.

1. *PLUMULARIA SETACEA*, p. 297, nat. size.

1 *a*. A portion of the stem and pinnæ, magnified, showing the axillary position of the capsule.

2. *PLUMULARIA CATHARINA*, p. 299, nat. size.

2 *a*. Portion, magnified.—2 *b*. The capsule (female).



Tuffen West. sculp.

W West. imp

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PLATE LXVII.

FIG.

1. *PLUMULARIA OBLIQUA*, p. 304, nat. size.

1 *a*. A portion of the stem, magnified, with a single pinna.
—1 *b*. A calycle, more highly magnified. The last figure is from a drawing by Mr. Busk.

2. *PLUMULARIA HALECIOIDES*, p. 306, nat. size.

2 *a*. Stem and pinnae, magnified.—2 *b*. A portion of the compound stem.—2 *c*. The capsule.

3. *PLUMULARIA FRUTESCENS*, p. 307, nat. size.

3 *a*. Pinna, magnified, with a capsule.



Tuffen West sculp.

W. West imp.

